

Form 1 Page 1 Execution Page	U.S. SECURITIES AND EXCHANGE COMMISSION WASHINGTON, D.C. 20549	Date filed (MM/DD/YY) 10/30/17	OFFICIAL USE ONLY
APPLICATION FOR, AND AMENDMENTS TO APPLICATION FOR, REGISTRATION AS A NATIONAL SECURITIES EXCHANGE OR EXEMPTION FROM REGISTRATION PURSUANT TO SECTION 5 OF THE EXCHANGE ACT			
WARNING: Failure to keep this form current and to file accurate supplementary information on a timely basis, or the failure to keep accurate books and records or otherwise to comply with the provisions of law applying to the conduct of the applicant would violate the federal securities laws and may result in disciplinary, administrative or criminal action.			
INTENTIONAL MISSTATEMENTS OR OMISSIONS OF FACTS MAY CONSTITUTE CRIMINAL VIOLATIONS			
<input type="checkbox"/> APPLICATION <input checked="" type="checkbox"/> AMENDMENT			
1.	State the name of the applicant: <u>Cboe EDGA Exchange, Inc.</u>		
2.	Provide the applicant's primary street address (Do not use a P.O. Box): <u>8050 Marshall Dr., Suite 120</u> <u>Lenexa, Kansas 66214</u>		
3.	Provide the applicant's mailing address (if different): _____ _____		
4.	Provide the business telephone and facsimile number: <u>(913) 815-7000</u> (Telephone) <u>(913) 815-7119</u> (Facsimile)		
5.	Provide the name, title and telephone number of a contact employee: <u>Anders Franzon</u> SVP, Associate General Counsel, Bats EDGA Exchange, Inc. <u>(913) 815-7154</u> (Name) (Title) (Telephone Number)		
6.	Provide the name and address of counsel for the applicant: <u>Joanne Moffic-Silver</u> <u>400 S. LaSalle Street</u> <u>Chicago, IL 60605</u>		
7.	Provide the date that applicant's fiscal year ends: <u>December 31</u>		
8.	Indicate legal status of the applicant: <input checked="" type="checkbox"/> Corporation <input type="checkbox"/> Sole Partnership <input type="checkbox"/> Partnership <input type="checkbox"/> Limited Liability Company <input type="checkbox"/> Other (specify): _____		
If other than a sole proprietor, indicate the date and place where applicant obtained its legal status (e.g. state where incorporated, place where partnership agreement was filed or where applicant entity was formed): (a) Date (MM/DD/YY): <u>11/01/07</u> (b) State/Country of formation: <u>Delaware/United States of America</u> (c) Statute under which applicant was organized: <u>General Corporation Law of the State of Delaware</u>			
EXECUTION: The applicant consents that service of any civil action brought by, or notice of any proceeding before, the Securities and Exchange Commission in connection with the applicant's activities may be given by registered or certified mail or confirmed telegram to the applicant's contact employee at the main address, or mailing address if different, given in Items 2 and 3. The undersigned, being first duly sworn, deposes and says that he/she has executed this form on behalf of, and with the authority of, said applicant. The undersigned and applicant represent that the information and statement contained herein, including exhibits, schedules, or other documents attached hereto, and other information filed herewith, all of which are made a part hereof, are current, true and complete.			
Date:	<u>10/30/17</u> (MM/DD/YY)	<u>Cboe EDGA Exchange, Inc.</u> (Name of Applicant)	
By:	<u>[Signature]</u> (Signature)	<u>Anders Franzon, SVP, Associate General Counsel</u> (Printed Name and Title)	
Subscribed and sworn before me this <u>30th</u> day of <u>October</u> , 20 <u>17</u> by <u>Brian Hansen</u> (Month) (Year) (Notary Public)			
My Commission expires <u>08/04/19</u> County of <u>Johnson</u> State of <u>Kansas</u>			
This page must always be completed in full with original, manual signature and notarization. Affix notary stamp or seal where applicable.			





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October 30, 2017

Via Federal Express

Ms. Jeanette Marshall
Securities and Exchange Commission
Division of Trading and Markets
100 F Street, N.E.
Mail Stop 6628
Washington, DC 20549-0001

SEC
Mail Processing
Section

OCT 31 2017

Washington DC
411

**Re: Cboe EDGA Exchange, Inc.
Form 1 Amendment**

Dear Jeanette:

On behalf of Cboe EDGA Exchange, Inc. (the "Exchange"), and in connection with the Cboe Form 1 that is on file with the Securities and Exchange Commission ("Commission"), enclosed please find one original and two copies of the Execution Page to Form 1 as well as the following exhibit:

- Exhibit A (updated to reflect the Exchange's Certificate of Incorporation and Bylaw information in accordance with SEC Rule 6a-2(d)(3));
- Exhibit B (updated to reflect location of the Exchange's current rulebook and information circulars in accordance with SEC Rule 6a-2(d)(3));
- Exhibit C (updated to reflect list of Directors and Committee Members);
- Exhibit F (updated to include the most recent, final versions of agreements circulated to Members and other Users of the Exchange)
- Exhibit H (listing applications, including agreements required to be executed in connection with listing and a schedule of listing fees);
- Exhibit K (updated to reflect Exchange ownership details);
- Exhibit M (updated to provide a list of firms currently approved as members or other users of the Exchange);

This amendment is filed in accordance with SEC Rule 6a-2 and is intended to replace Exhibits A, B, C, F, H, K, and M currently on file with the Commission. Please do not hesitate to contact me if you have any questions or require anything further.

Sincerely,

Anders Franzon
SVP, Associate General Counsel

Enclosures

Exhibit A

Exhibit Request:

A copy of the constitution, articles of incorporation or association with all subsequent amendments, and of existing by-laws or corresponding rules or instruments, whatever the name, of the applicant.

Response:

Cboe EDGA Exchange, Inc. (the "Exchange") is registered as a national securities exchange pursuant to Section 6(a) of the Securities Exchange Act of 1934. The following materials required by this Exhibit A are available on the "Regulation" page of the Exchange's public website (<http://markets.cboe.com/us/equities/regulation/>):

1. Certificate of Incorporation of Cboe EDGA Exchange, Inc.
2. Amended and Restated By-Laws of Cboe EDGA Exchange, Inc.

These documents are updated and accurate as of the dates of each document.

Exhibit B

Exhibit Request:

A copy of all written rulings, settled practices having the effect of rules, and interpretations of the Governing Board or other committee of the applicant in respect of any provisions of the constitution, by-laws, rules, or trading practices of the applicant which are not included in Exhibit A.

Response:

1. The Rules of Cboe EDGA Exchange, Inc. are available at <http://markets.cboe.com/us/equities/regulation/>. Rule filings and circulars are also available at this location. These documents are updated frequently and are accurate as of the respective dates on each document.

Exhibit C

Exhibit Request:

For each subsidiary or affiliate of the applicant, and for any entity with whom the applicant has a contractual or other agreement relating to the operation of an electronic trading system to be used to effect transactions on the exchange ("System"), provide the following information:

1. Name and address of organization.
2. Form of organization (e.g., association, corporation, partnership, etc.).
3. Name of state and statute citation under which organized. Date of incorporation in present form.
4. Brief description of nature and extent of affiliation.
5. Brief description of business or functions. Description should include responsibilities with respect to operation of the System and/or execution, reporting, clearance, or settlement of transactions in connection with operation of the System.
6. A copy of the constitution.
7. A copy of the articles of incorporation or association including all amendments.
8. A copy of existing by-laws or corresponding rules or instruments.
9. The name and title of the present officers, governors, members of all standing committees or persons performing similar functions.
10. An indication of whether such business or organization ceased to be associated with the applicant during the previous year, and a brief statement of the reasons for termination of the association.

Response: Please see below responses for the following entities:

A. Bats Global Markets Holdings, Inc.

1. *Name:* Bats Global Markets Holdings, Inc.
Address: 8050 Marshall Dr., Ste. 120, Lenexa, KS 66214
2. *Form of organization:* Corporation.
3. *Name of state, statute under which organized and date of incorporation:*
Incorporated in Delaware under Section 101 of the General Corporation Law of the State of Delaware on June 29, 2007.
4. *Brief description of nature and extent of affiliation:* Cboe Bats, LLC owns 100% of the membership interests of Bats Global Markets Holdings, Inc. Bats Global Markets Holdings, Inc. is the Exchange's 100% owner.
5. *Brief description of business or functions:* Bats Global Markets Holdings, Inc. is an intermediate holding company.
6. *Copy of constitution:* Not applicable.
7. *Copy of articles of incorporation or association and amendments:* No changes.
8. *Copy of existing by-laws:* No changes.
9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions:*

Current Directors

- Ed Tilly
- Chris Concannon

Current Officers

- Ed Tilly (Chief Executive Officer)
- Chris Concannon (President, COO)
- Bryan Harkins (Senior Vice President)
- Alan Dean (Treasurer)
- Joanne Moffic-Silver (Secretary)

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year:* Not applicable.

B. Direct Edge LLC

1. *Name:* Direct Edge LLC (f/k/a Direct Edge, Inc.)
Address: 8050 Marshall Dr., Ste. 120, Lenexa, KS 66214
2. *Form of organization:* Limited Liability Company.
3. *Name of state, statute under which organized and date of incorporation:* Formed in Delaware under Section 201 of the Limited Liability Company Act of the State of Delaware on December 31, 2014. Was converted from Direct Edge, Inc., a Delaware corporation, on December 31, 2014.
4. *Brief description of nature and extent of affiliation:* Cboe Bats, LLC owns 100% of the membership interests of Direct Edge LLC.
5. *Brief description of business or functions:* Direct Edge LLC is an intermediate holding company. Direct Edge LLC is the sole shareholder of Cboe EDGA Exchange, Inc. and Cboe EDGX Exchange, Inc.
6. *Copy of constitution:* Not applicable.
7. *Copy of articles of incorporation or association and amendments:* No changes.
8. *Copy of existing by-laws or corresponding rules or instruments:* No changes.
9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions:*

Current Directors

- None

Current Officers

- Ed Tilly (Chief Executive Officer)
 - Chris Concannon (President)
 - Bryan Harkins (Senior Vice President)
 - Alan Dean (Chief Financial Officer)
 - Chris Isaacson (Chief Information Officer)
 - Joanne Moffic-Silver (Secretary)
10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year:* Not applicable.

C. Cboe BZX Exchange, Inc.

1. *Name:* Cboe BZX Exchange, Inc.
Address: 8050 Marshall Dr., Ste. 120, Lenexa, KS 66214
2. *Form of organization:* Corporation.
3. *Name of state, statute under which organized and date of incorporation:*
Incorporated in Delaware under Section 101 of the General Corporation Law of the State of Delaware on November 1, 2007.
4. *Brief description of nature and extent of affiliation:* Cboe BZX Exchange, Inc. is wholly-owned by Bats Global Markets Holdings, Inc., which is also the Exchange's 100% owner.
5. *Brief description of business or functions:* Cboe BZX Exchange, Inc. operates as a registered national securities exchange pursuant to Section 6 of the Act.
6. *Copy of constitution:* Not applicable.
7. *Copy of articles of incorporation or association and amendments:* See attached amendment indicating the entity name change.
8. *Copy of existing by-laws:* See attached for Seventh Amended and Restated By-laws.
9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions:*

Current Directors

- Ed Tilly
- Chris Concannon
- David Roscoe
- Sandy Kemper
- Scott Wagner
- Jill Sommers
- Matt Billings
- Joseph Mecane

Current Officers

- Ed Tilly (CEO)
- Chris Concannon (President, COO)
- Chris Isaacson (Executive Vice President, Global Chief Information Officer)
- Bryan Harkins (Executive Vice President, Head of U.S. Markets)
- Brian N. Schell (Executive Vice President, Chief Financial Officer, Treasurer)

- Bryan Christian (Senior Vice President, Head of U.S. Sales)
- Laura Morrison (Senior Vice President, Global Head of Exchange Products)
- Eric Crampton (Senior Vice President, Global Head of Software Engineering)
- Troy Yeazel (Senior Vice President, Operations)
- Jeff Connell (Senior Vice President, Market Oversight)
- Derick Shupe (Vice President, Controller)
- Greg Steinberg (Vice President, Assistant Secretary and Associate General Counsel)
- Aaron Weissenfluh (Vice President, Chief Information Security Officer)
- Rodney Burt (Vice President, Infrastructure)
- Kevin Carrai (Vice President, Connectivity, Data & Member Services)
- Stacie Fleming (Vice President, Communications)
- Anders Franzon (Senior Vice President, Associate General Counsel)
- Kapil Rathi (Senior Vice President, Options Business Development)
- Thad Prososki (Vice President, Human Resources)
- Brett Johnson (Vice President, Software Engineering)
- Vivian Yiu (Vice President, Head of Product Strategy and Management)
- Alexandra Albright (Chief Compliance Officer)
- Pamela Culpepper (Chief HR Officer)
- Alan Dean (Executive Vice President F&A/Chief Financial Officer)
- Jon Deters (CSO & Head Corporate Initiatives)
- James Enstrom (Vice President & Chief Audit Executive)
- Angelo Evangelou (Deputy General Counsel)
- Eric Frait (Vice President Business Analysis)
- Todd Furney (Vice President, Chief Risk Officer)
- Alicia Goldberg (Vice President Statistical Analysis)
- David Gray (Vice President Business Development GCS)
- Gregory Hoogasian (Senior Vice President, Chief Regulatory Officer)
- Carol Kennedy (Vice President & Chief Communications Officer)
- Stephanie Klein (Vice President, Chief Marketing Officer)
- Andrew Lowenthal (Senior Vice President Business Development)
- Joanne Moffic-Silver (Executive Vice President, General Counsel & Corporate Secretary)
- Donald Patton (Vice President Accountant/Controller)
- Arthur Reinstein (Deputy General Counsel)
- David Reynolds (Vice President & Chief Accounting Officer)
- John Patrick Sexton (Deputy General Counsel)

Standing Committees

Compensation Committee

- Sandy Kemper
- Scott Wagner
- Jill Sommers

Audit Committee

- Jill Sommers
- David Roscoe
- Matt Billings

Regulatory Oversight Committee

- Scott Wagner
- Sandy Kemper
- David Roscoe

Appeals Committee

- Matt Billings
- Joseph Mecane
- Scott Wagner

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year:* Not applicable.

D. Cboe BYX Exchange, Inc.

1. *Name:* Cboe BYX Exchange, Inc.
Address: 8050 Marshall Dr., Ste. 120, Lenexa, KS 66214
2. *Form of organization:* Corporation.
3. *Name of state, statute under which organized and date of incorporation:*
Incorporated in Delaware under Section 101 of the General Corporation Law of the State of Delaware on July 31, 2009.
4. *Brief description of nature and extent of affiliation:* Cboe BYX Exchange, Inc. is wholly-owned by Bats Global Markets Holdings, Inc., which is also the Exchange's 100% owner.
5. *Brief description of business or functions:* Cboe BYX Exchange, Inc. operates as a registered national securities exchange pursuant to Section 6 of the Act.
6. *Copy of constitution:* Not applicable.
7. *Copy of articles of incorporation or association and amendments:* No changes.
8. *Copy of existing by-laws:* No changes.
9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions:*

Current Directors

- Ed Tilly
- Chris Concannon
- David Roscoe
- Sandy Kemper
- Scott Wagner
- Jill Sommers
- Matt Billings
- Joseph Mecane

Current Officers

- Ed Tilly (CEO)
- Chris Concannon (President, COO)
- Chris Isaacson (Executive Vice President, Global Chief Information Officer)
- Bryan Harkins (Executive Vice President, Head of U.S. Markets)
- Brian N. Schell (Executive Vice President, Chief Financial Officer, Treasurer)
- Bryan Christian (Senior Vice President, Head of U.S. Sales)
- Laura Morrison (Senior Vice President, Global Head of Exchange Products)

- Eric Crampton (Senior Vice President, Global Head of Software Engineering)
- Troy Yeazel (Senior Vice President, Operations)
- Jeff Connell (Senior Vice President, Market Oversight)
- Dérick Shupe (Vice President, Controller)
- Greg Steinberg (Vice President, Assistant Secretary and Associate General Counsel)
- Aaron Weissenfluh (Vice President, Chief Information Security Officer)
- Rodney Burt (Vice President, Infrastructure)
- Kevin Carrai (Vice President, Connectivity, Data & Member Services)
- Stacie Fleming (Vice President, Communications)
- Anders Franzon (Senior Vice President, Associate General Counsel)
- Kapil Rath (Senior Vice President, Options Business Development)
- Thad Proski (Vice President, Human Resources)
- Brett Johnson (Vice President, Software Engineering)
- Vivian Yiu (Vice President, Head of Product Strategy and Management)
- Alexandra Albright (Chief Compliance Officer)
- Pamela Culpepper (Chief HR Officer)
- Alan Dean (Executive Vice President F&A/Chief Financial Officer)
- Jon Deters (CSO & Head Corporate Initiatives)
- James Enstrom (Vice President & Chief Audit Executive)
- Angelo Evangelou (Deputy General Counsel)
- Eric Frait (Vice President Business Analysis)
- Todd Furney (Vice President, Chief Risk Officer)
- Gregory Hoogasian (Senior Vice President, Chief Regulatory Officer)
- Carol Kennedy (Vice President & Chief Communications Officer)
- Stephanie Klein (Vice President, Chief Marketing Officer)
- Joanne Moffic-Silver (Executive Vice President, General Counsel & Corporate Secretary)
- Donald Patton (Vice President Accountant/Controller)
- Arthur Reinstein (Deputy General Counsel)
- David Reynolds (Vice President & Chief Accounting Officer)
- John Patrick Sexton (Deputy General Counsel)

Standing Committees

Compensation Committee

- Sandy Kemper
- Scott Wagner
- Jill Sommers

Audit Committee

- Jill Sommers
- David Roscoe
- Matt Billings

Regulatory Oversight Committee

- Scott Wagner
- Sandy Kemper
- David Roscoe

Appeals Committee

- Matt Billings
- Joseph Mecane
- Scott Wagner

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year:* Not applicable.

E. Cboe EDGX Exchange, Inc.

1. *Name:* Cboe EDGX Exchange, Inc.
Address: 8050 Marshall Dr., Ste. 120, Lenexa, KS 66214
2. *Form of organization:* Corporation.
3. *Name of state, statute under which organized and date of incorporation:* Formed in Delaware under the General Corporation Law of the State of Delaware on March 9, 2009.
4. *Brief description of nature and extent of affiliation:* Cboe EDGX Exchange, Inc. is an indirect wholly-owned subsidiary of Cboe Global Markets, Inc., the Exchange's ultimate parent.
5. *Brief description of business or functions:* Cboe EDGX Exchange, Inc. operates a registered national securities exchange pursuant to Section 6 of the Act.
6. *Copy of constitution:* Not applicable.
7. *Copy of articles of incorporation or association and amendments:* See attached amendment indicating the entity name change.
8. *Copy of existing by-laws:* See attached for Eighth Amended and Restated By-laws.
9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions:*

Current Directors

- Ed Tilly
- Chris Concannon
- David Roscoe
- Sandy Kemper
- Scott Wagner
- Jill Sommers
- Matt Billings
- Joseph Mecane

Current Officers

- Ed Tilly (CEO)
- Chris Concannon (President, COO)
- Chris Isaacson (Executive Vice President, Global Chief Information Officer)
- Bryan Harkins (Executive Vice President, Head of U.S. Markets)
- Brian N. Schell (Executive Vice President, Chief Financial Officer, Treasurer)

- Bryan Christian (Senior Vice President, Head of U.S. Sales)
- Laura Morrison (Senior Vice President, Global Head of Exchange Products)
- Eric Crampton (Senior Vice President, Global Head of Software Engineering)
- Troy Yeazel (Senior Vice President, Operations)
- Jeff Connell (Senior Vice President, Market Oversight)
- Derick Shupe (Vice President, Controller)
- Greg Steinberg (Vice President, Assistant Secretary and Associate General Counsel)
- Aaron Weissenfluh (Vice President, Chief Information Security Officer)
- Rodney Burt (Vice President, Infrastructure)
- Kevin Carrai (Vice President, Connectivity, Data & Member Services)
- Stacie Fleming (Vice President, Communications)
- Anders Franzon (Senior Vice President, Associate General Counsel)
- Kapil Rathi (Senior Vice President, Options Business Development)
- Thad Prososki (Vice President, Human Resources)
- Brett Johnson (Vice President, Software Engineering)
- Vivian Yiu (Vice President, Head of Product Strategy and Management)
- Alexandra Albright (Chief Compliance Officer)
- Pamela Culpepper (Chief HR Officer)
- Alan Dean (Executive Vice President F&A/Chief Financial Officer)
- Jon Deters (CSO & Head Corporate Initiatives)
- James Enstrom (Vice President & Chief Audit Executive)
- Angelo Evangelou (Deputy General Counsel)
- Eric Frait (Vice President Business Analysis)
- Todd Furney (Vice President, Chief Risk Officer)
- Alicia Goldberg (Vice President Statistical Analysis)
- David Gray (Vice President Business Development GCS)
- Gregory Hoogasian (Senior Vice President, Chief Regulatory Officer)
- Carol Kennedy (Vice President & Chief Communications Officer)
- Stephanie Klein (Vice President, Chief Marketing Officer)
- Andrew Lowenthal (Senior Vice President Business Development)
- Joanne Moffic-Silver (Executive Vice President, General Counsel & Corporate Secretary)
- Donald Patton (Vice President Accountant/Controller)
- Arthur Reinstein (Deputy General Counsel)
- David Reynolds (Vice President & Chief Accounting Officer)
- John Patrick Sexton (Deputy General Counsel)

Standing Committees

Compensation Committee

- Sandy Kemper
- Scott Wagner
- Jill Sommers

Audit Committee

- Jill Sommers
- David Roscoe
- Matt Billings

Regulatory Oversight Committee

- Scott Wagner
- Sandy Kemper
- David Roscoe

Appeals Committee

- Matt Billings
- Joseph Mecane
- Scott Wagner

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year:* Not applicable.

F. Cboe Trading, Inc.

1. *Name:* Cboe Trading, Inc.
Address: 8050 Marshall Dr., Ste. 120, Lenexa, KS 66214
2. *Form of organization:* Corporation.
3. *Name of state, statute under which organized and date of incorporation:*
Incorporated in Delaware under Section 101 of the General Corporation Law of the State of Delaware on June 16, 2005.
4. *Brief description of nature and extent of affiliation:* Cboe Trading, Inc. is wholly-owned by Bats Global Markets Holdings, Inc., which is also the Exchange's 100% owner.
5. *Brief description of business or functions:* Cboe Trading, Inc. is a broker-dealer registered as such with the Securities and Exchange Commission and a member of the Financial Industry Regulatory Authority and other self-regulatory organizations. Cboe Trading, Inc. provides routing of orders from the Exchange Cboe BYX Exchange, Inc., Cboe EDGA Exchange, Inc. and Cboe EDGX Exchange, Inc. to other securities exchanges, facilities of securities exchanges, automated trading systems, electronic communication networks or other broker-dealers.
6. *Copy of constitution:* Not applicable.
7. *Copy of articles of incorporation or association and amendments:* See attached amendment indicating the entity name change.
8. *Copy of existing by-laws:* See attached
9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions:*

Current Directors

- Chris Isaacson
- Chris Concannon
- Brian N. Schell

Current Officers

- Troy Yeazel (President)
- Anders Franzon (Secretary)
- Bryan Upp (Chief Compliance Officer)
- Derick Shupe (FINOP, Treasurer)

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year:* Not applicable.

G. Omicron Acquisition Corp.

1. *Name:* Omicron Acquisition Corp.
Address: 8050 Marshall Dr., Ste. 120, Lenexa, KS 66214
2. *Form of organization:* Corporation.
3. *Name of state, statute under which organized and date of incorporation:*
Incorporated in Delaware under Section 101 of the General Corporation Law of the State of Delaware on February 7, 2011.
4. *Brief description of nature and extent of affiliation:* Omicron Acquisition Corp. is wholly-owned by Bats Global Markets Holdings, Inc., which is an affiliate of the Exchange.
5. *Brief description of business or functions:* Omicron Acquisition Corp. is an intermediate holding company of Bats Worldwide Holdings Limited.
6. *Copy of constitution:* Not applicable.
7. *Copy of articles of incorporation or association and amendments:* No changes.
8. *Copy of existing by-laws:* No changes.
9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions:*

Current Directors

- Ed Tilly
- Chris Concannon
- Mark Hemsley

Current Officers

- Mark Hemsley (President and Treasurer)
- Joanne Moffic-Silver (Vice President and Secretary)

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year:* Not applicable.

H. Cboe FX Holdings, LLC

1. *Name:* Cboe FX Holdings, LLC
Address: 8050 Marshall Dr., Ste. 120, Lenexa, KS 66214
2. *Form of organization:* Limited Liability Company.
3. *Name of state, statute under which organized and date of incorporation:* Formed in Delaware under Section 201 of the Limited Liability Company Act of the State of Delaware on May 15, 2000. Name was amended from Hotspot FX Holdings, LLC, a Delaware LLC, on March 11, 2015.
4. *Brief description of nature and extent of affiliation:* Cboe FX Holdings, LLC is wholly-owned by Bats Global Markets Holdings, Inc., which is an affiliate of the Exchange.
5. *Brief description of business or functions:* Cboe FX Holdings, LLC is an intermediate holding company of Cboe FX Markets, LLC, Cboe FX Services, LLC, Bats Hotspot SEF LLC, and Bats Hotspot IB LLC.
6. *Copy of constitution:* Not applicable.
7. *Copy of articles of incorporation or association and amendments:* See attached amendment indicating the entity name change.
8. *Copy of existing by-laws:* No changes.
9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions:*

Current Directors

- None

Current Officers

- Ed Tilly (Chief Executive Officer)
- Chris Concannon (President)
- Bryan Harkins (Senior Vice President)
- Alan Dean (Treasurer)
- Joanne Moffic-Silver (Secretary)

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year:* Not applicable.

I. Cboe FX Markets, LLC

1. *Name:* Cboe FX Markets, LLC
Address: 8050 Marshall Dr., Ste. 120, Lenexa, KS 66214
2. *Form of organization:* Limited Liability Company.
3. *Name of state, statute under which organized and date of incorporation:* Formed in New Jersey under Section 42 of the Limited Liability Company Act of the State of New Jersey on August 7, 2001. Name was amended from KCG Hotspot FX LLC, a Delaware LLC, on March 12, 2015.
4. *Brief description of nature and extent of affiliation:* Cboe FX Markets, LLC is wholly-owned by Cboe FX Holdings, LLC, which is wholly-owned by Bats Global Markets Holdings, Inc., which is an affiliate of the Exchange.
5. *Brief description of business or functions:* Cboe FX Markets, LLC operates an institutional spot foreign exchange market.
6. *Copy of constitution:* Not applicable.
7. *Copy of articles of incorporation or association and amendments:* See attached amendment indicating the entity name change.
8. *Copy of existing by-laws:* No changes.
9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions:*

Current Directors

- None

Current Officers

- Ed Tilly (Chief Executive Officer)
 - Chris Concannon (President)
 - Bryan Harkins (Senior Vice President)
 - Alan Dean (Treasurer)
 - Joanne Moffic-Silver (Secretary)
 - Barry Calder (Head of Liquidity & Client Services)
 - Paul Reidy (Chief Operating Officer)
 - Lisa Shemie (Associate General Counsel)
10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year:* Not applicable.

J. Cboe FX Services, LLC

1. *Name:* Cboe FX Services, LLC
Address: 8050 Marshall Dr., Ste. 120, Lenexa, KS 66214
2. *Form of organization:* Limited Liability Company.
3. *Name of state, statute under which organized and date of incorporation:* Formed in New Jersey under Section 42 of the Limited Liability Company Act of the State of New Jersey on November 22, 2004. Name was amended from KCG Hotspot FX LLC, a Delaware LLC, on March 12, 2015.
4. *Brief description of nature and extent of affiliation:* Cboe FX Services, LLC is wholly-owned by Cboe FX Holdings, LLC, which is wholly-owned by Bats Global Markets Holdings, Inc., which is an affiliate of the Exchange.
5. *Brief description of business or functions:* Cboe FX Services, LLC operates an institutional spot foreign exchange market.
6. *Copy of constitution:* Not applicable.
7. *Copy of articles of incorporation or association and amendments:* See attached amendment indicating the entity name change.
8. *Copy of existing by-laws:* No changes.
9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions:*

Current Directors

- None

Current Officers

- Ed Tilly (Chief Executive Officer)
 - Chris Concannon (President)
 - Bryan Harkins (Senior Vice President)
 - Alan Dean (Treasurer)
 - Joanne Moffic-Silver (Secretary)
 - Barry Calder (Head of Liquidity & Client Securities)
10. Indication of whether such business or organization ceased to be associated with the applicant during previous year: Not applicable.

K. Bats International Holdings Limited

1. *Name:* Bats International Holdings Limited
Address: 10 Lower Thames Street, 6th Floor, London, UK EC3R 6AF
2. *Form of organization:* Private Company Limited by Shares.
3. *Name of state, statute under which organized and date of incorporation:*
Incorporated in England and Wales under the Companies Act 1985 on February 5, 2015.
4. *Brief description of nature and extent of affiliation:* Bats International Holdings Limited is wholly-owned by Bats Worldwide Holdings Limited, which is an affiliate of the Exchange.
5. *Brief description of business or functions:* Bats International Holdings Limited is a holding company of Cboe FX Europe Limited, Bats Hotspot Asia Pte. Ltd., and IndexPubs S.A.
6. *Copy of constitution:* Not applicable.
7. *Copy of articles of incorporation or association and amendments:* No changes.
8. *Copy of existing by-laws:* Not applicable.
9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions:*

Current Directors

- Ed Tilly
- Chris Concannon
- Mark Hemsley

Current Officers

- Antonio Amelia (Secretary)

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year:* Not applicable.

L. Cboe FX Europe Limited

1. *Name:* Cboe FX Europe Limited
Address: 10 Lower Thames Street, 6th Floor, London, UK EC3R 6AF
2. *Form of organization:* Private Company Limited by Shares.
3. *Name of state, statute under which organized and date of incorporation:*
Incorporated in England and Wales under the Companies Act 1985 on February 5, 2015.
4. *Brief description of nature and extent of affiliation:* Cboe FX Europe Limited is wholly-owned by Bats International Holdings Limited which is wholly-owned by Bats Worldwide Holdings Limited, which is an affiliate of the Exchange.
5. *Brief description of business or functions:* Cboe FX Europe Limited operates an institutional spot foreign exchange market.
6. *Copy of constitution:* Not applicable.
7. *Copy of articles of incorporation or association and amendments:* See attached amendment indicating the entity name change.
8. *Copy of existing by-laws:* Not applicable.
9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions:*

Current Directors

- Ed Tilly
- Chris Concannon
- Mark Hemsley

Current Officers

- Antonio Amelia (Secretary)

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year:* Not applicable.

M. Bats Hotspot Asia Pte. Ltd.

1. *Name:* Bats Hotspot Asia Pte. Ltd.
Address: 16 Collyer Quay, #2104, Sixteen Collyer Quay, Singapore (049318)
2. *Form of organization:* Private Company Limited by Shares.
3. *Name of state, statute under which organized and date of incorporation:*
Incorporated in Singapore under the Companies Act (Cap. 50) on February 23, 2015.
4. *Brief description of nature and extent of affiliation:* Bats Hotspot Asia Pte. Ltd. is wholly-owned by Bats International Holdings Limited which is wholly-owned by Bats Worldwide Holdings Limited, which is an affiliate of the Exchange.
5. *Brief description of business or functions:* Bats Hotspot Asia Pte. Ltd. operates an institutional spot foreign exchange market.
6. *Copy of constitution:* Not applicable.
7. *Copy of articles of incorporation or association and amendments:* No changes.
8. *Copy of existing by-laws:* Not applicable.
9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions:*

Current Directors

- Chris Concannon
- Ng Lip Chih

Current Officers

- Chris Concannon (President)
- Chew Pei Tsing (Secretary)
- Lai Jek Ping (Secretary)

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year:* Not applicable.

N. Bats Trading Limited

1. *Name:* Bats Trading Limited
Address: 10 Lower Thames Street, 6th Floor, London, UK EC3R 6AF
2. *Form of organization:* Private Company Limited by Shares.
3. *Name of state, statute under which organized and date of incorporation:*
Incorporated in England and Wales under the Companies Act 1985 on March 28, 2008.
4. *Brief description of nature and extent of affiliation:* Bats Trading Limited is wholly-owned by Bats Worldwide Holdings Limited, which is an affiliate of the Exchange.
5. *Brief description of business or functions:* Bats Trading Limited is recognized as a Recognized Investment Exchange in the United Kingdom under the Financial Services and Markets Act 2000 ("FSMA"). It operates a platform for trading of European equity securities.
6. *Copy of constitution:* Not applicable.
7. *Copy of articles of incorporation or association and amendments:* No changes.
8. *Copy of existing by-laws:* Not applicable.
9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions:*

Current Directors

- Mark Hemsley
- Adam Eades
- John Woodman
- Richard Balarkas
- Rebecca Fuller
- Julian Corner
- Kristian West
- Ted Hood

Current Officers

- Mark Hemsley (CEO)
- Antonio Amelia (Secretary)
- Jill Griebenow (CFO)
- Adam Eades (Chief Legal and Regulatory Officer)
- Jerry Avenell (Co-Head Sales)
- Alex Dalley (Co-Head Sales)
- Guy Simpkin (Head of Business Development)
- David Howson (COO)

Standing Committees

Audit, Risk and Compliance Committee

- Ted Hood
- Rebecca Fuller
- Richard Balarkas

Remuneration Committee

- John Woodman
- Rebecca Fuller

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year:* Not applicable.

O. Chi-X Europe Limited

1. *Name:* Chi-X Europe Limited
Address: 10 Lower Thames Street, 6th Floor, London, UK EC3R 6AF
2. *Form of organization:* Private Company Limited by Shares.
3. *Name of state, statute under which organized and date of incorporation:*
Incorporated in England and Wales. It changed its name to Chi-X Europe Limited on July 2, 2007.
4. *Brief description of nature and extent of affiliation:* Chi-X Europe Limited is wholly-owned by Bats Trading Limited which, in turn, is indirectly wholly owned by Bats Global Markets, Inc.
5. *Brief description of business or functions:* Chi-X Europe Limited is authorized in the United Kingdom under the Financial Services and Markets Act 2000 ("FSMA"), as an investment firm. Between April 30, 2012 and May 20, 2013 it was a dormant company. Since May 20, 2013, Chi-X Europe Limited operates the smart order router that is needed for the routing strategies deployed by Bats Trading Limited.
6. *Copy of constitution:* Not applicable.
7. *Copy of articles of incorporation or association and amendments:* No changes.
8. *Copy of existing by-laws:* Not applicable.
9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions:*

Current Directors
 - Mark Hemsley
 - Adam Eades
 - John Woodman
Current Officers
 - John Woodman (Chairman)
 - Mark Hemsley (CEO)
 - Antonio Amelia (Secretary)
 - Jill Griebenow (CFO)
 - Adam Eades (Chief Legal and Regulatory Officer)
10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year:* Not applicable.

P. Cboe ETF.com, Inc.

1. *Name:* Cboe ETF.com, Inc.
Address: 8050 Marshall Dr., Ste. 120, Lenexa, KS 66214
2. *Form of organization:* Corporation.
3. *Name of state, statute under which organized and date of incorporation:*
Incorporated in Delaware under Section 101 of the General Corporation Law of the State of Delaware on March 28, 2016.
4. *Brief description of nature and extent of affiliation:* Cboe ETF.com, Inc. is wholly-owned by Bats Global Markets Holdings, Inc., which is also the Exchange's 100% owner.
5. *Brief description of business or functions:* Cboe ETF.com, Inc. is a media company providing ETF data, news and analysis.
6. *Copy of constitution:* Not applicable.
7. *Copy of articles of incorporation or association and amendments:* See attached amendment indicating the entity name change.
8. *Copy of existing by-laws:* No changes.
9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions:*

Current Directors

- Ed Tilly
- Chris Concannon

Current Officers

- Dave Nadig (Chief Executive Officer)
 - Chris Concannon (President and Chief Operating Officer)
 - Bryan Harkins (Senior Vice President)
 - Alan Dean (Chief Financial Officer and Treasurer)
 - Chris Isaacson (Executive Vice President and Global Chief Information Officer)
 - Joanne Moffic-Silver (Executive Vice President, General Counsel and Secretary)
10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year:* Not applicable.

Q. INDEXPUBS S.A.

1. *Name:* INDEXPUBS S.A.
Address: Almagro Plaza, Ste. 508, Pedro Ponce Carrasco, E8-06 y Diego de Almagro, 170516 – Quito, Ecuador
2. *Form of organization:* Corporation (Soceidad Anonima or S.A.).
3. *Name of state, statute under which organized and date of incorporation:*
Incorporated in Ecuador on January 15, 2008.
4. *Brief description of nature and extent of affiliation:* INDEXPUBS S.A. is owned 0.1% by Fernando Rivera and 99.9% by Bats International Holdings Limited which is wholly-owned by Bats Worldwide Holdings Limited, which is an affiliate of the Exchange.
5. *Brief description of business or functions:* INDEXPUBS S.A. is a media company providing ETF data, news and analysis.
6. *Copy of constitution:* No changes.
7. *Copy of articles of incorporation or association and amendments:* No changes.
8. *Copy of existing by-laws:* No changes.
9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions:*

Current Directors

Current Officers

- Dave Nadig (President)
 - Verónica Rocío Bravo (General Manager)
10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year:* Not applicable.

R. Bats Hotspot IB LLC

1. *Name:* Bats Hotspot IB LLC
Address: 17 State Street, 31st Floor, New York, NY 10004
2. *Form of organization:* Limited Liability Company.
3. *Name of state, statute under which organized and date of incorporation:* Formed in Illinois under Section 15-1 of the Limited Liability Company Act of the State of Illinois on May 23, 2003.
4. *Brief description of nature and extent of affiliation:* Bats Hotspot IB LLC is wholly-owned by Bats Hotspot Holdings LLC, which is wholly-owned by Bats Global Markets Holdings, Inc., which is an affiliate of the Exchange.
5. *Brief description of business or functions:* Bats Hotspot IB LLC is an introducing broker registered with the National Futures Association.
6. *Copy of constitution:* Not applicable.
7. *Copy of articles of incorporation or association and amendments:* No changes.
8. *Copy of existing by-laws:* No changes.
9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions:*

Current Officers

- Bryan Harkins (Senior Vice President)
- Derick Shupe (Chief Accounting Officer)

Managers

- Chris Concannon

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year:* Not applicable.

S. Bats Hotspot SEF LLC

1. *Name:* Bats Hotspot SEF LLC
Address: 17 State Street, 31st Floor, New York, NY 10004
2. *Form of organization:* Limited Liability Company.
3. *Name of state, statute under which organized and date of incorporation:* Formed in Delaware under Section 201 of the Limited Liability Company Act of the State of Delaware on April 19, 2012.
4. *Brief description of nature and extent of affiliation:* Bats Hotspot SEF LLC is wholly-owned by Bats Hotspot Holdings LLC, which is wholly-owned by Bats Global Markets Holdings, Inc., which is an affiliate of the Exchange.
5. *Brief description of business or functions:* Bats Hotspot SEF LLC is a swap execution facility registered with the Commodity Futures Trading Association, which will soon list non-deliverable foreign exchange forwards for trading.
6. *Copy of constitution:* Not applicable.
7. *Copy of articles of incorporation or association and amendments:* No changes.
8. *Copy of existing by-laws:* No changes.
9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions:*

Current Officers

- Bryan Harkins (Chief Executive Officer)
- Lisa Shemie (Chief Compliance Officer)

Managers

- Ed Tilly
- Gilbert Bassett
- Michael Gorham
- James Parisi
- Jill Sommers

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year:* Not applicable.

T. Bats Worldwide Holdings Limited

1. *Name:* Bats Worldwide Holdings Limited
Address: 10 Lower Thames Street, 6th Floor, London, UK EC3R 6AF
2. *Form of organization:* Private Company Limited by Shares.
3. *Name of state, statute under which organized and date of incorporation:*
Incorporated in England and Wales under the Companies Act 2006 on November 9, 2016.
4. *Brief description of nature and extent of affiliation:* Bats Worldwide Holdings Limited is wholly-owned by Omicron Acquisition Corp., which is an affiliate of the Exchange.
5. *Brief description of business or functions:* Bats Worldwide Holdings Limited is an intermediate holding company of Bats Trading Limited and Bats International Holdings Limited.
6. *Copy of constitution:* Not applicable.
7. *Copy of articles of incorporation or association and amendments:* No changes.
8. *Copy of existing by-laws:* Not applicable.
9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions:*

Current Directors

- Ed Tilly
- Chris Concannon
- Mark Hemsley

Current Officers

- Antonio Amelia (Secretary)

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year:* Not applicable.

U. Cboe Global Markets, Inc.

1. *Name:* Cboe Global Markets, Inc.
Address: 400 South LaSalle Street, Chicago, Illinois 60605
2. *Form of organization:* Corporation.
3. *Name of state, statute under which organized and date of incorporation:*
Delaware, Delaware General Corporation Law (8 Del. C. §101, et seq), August 15, 2006.
4. *Brief description of nature and extent of affiliation:* Cboe is a wholly-owned subsidiary of Cboe Global Markets, Inc.
5. *Brief description of business or functions:* Holding company.
6. *Copy of constitution:* Not applicable.
7. *Copy of articles of incorporation or association and amendments:* See attached amendment indicating the entity name change.
8. *Copy of existing by-laws:* See attached for Fourth Amended and Restated By-laws.
9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions:*

Current Directors

- Ed Tilly
- James Boris
- Frank English
- William Farrow
- Edward Fitzpatrick
- Janet Froetscher
- Jill Goodman
- Chris Mitchell
- Roderick Palmore
- Joe Ratterman
- Michael Richter
- Samuel Skinner
- Carole Stone
- Eugene Sunshine

Current Officers

- Chris Concannon (President and COO)
- Alan Dean (EVP, CFO and Treasurer)
- Mark Hemsley (EVP, President Europe)

- Chris Isaacson (EVP, CIO)
- Joanne Moffic-Silver (EVP, General Counsel & Corporate Secretary)
- David Reynolds (VP, & Chief Accounting Ofc)
- Edward Tilly (Chief Executive Officer)

Compensation Committee

- Frank English
- Janet Froetscher
- Samuel Skinner
- Eugene Sunshine

Audit Committee

- William Farrow
- Edward Fitzpatrick
- Carole Stone

Nominating and Governance Committee

- Jill Goodman
- Roderick Palmore
- Samuel Skinner
- Carole Stone
- Eugene Sunshine

Finance and Strategy Committee

- Frank English
- Edward Fitzpatrick
- Jill Goodman
- Carole Stone

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year:* Not applicable.

V. Cboe C2 Exchange, Inc.

1. *Name:* Cboe C2 Exchange, Inc.
Address: 400 South LaSalle Street, Chicago, Illinois 60605
2. *Form of organization:* Corporation.
3. *Name of state, statute under which organized and date of incorporation:*
Delaware, Delaware General Corporation Law (8 Del. C. § 101, et seq), July 21, 2009.
4. *Brief description of nature and extent of affiliation:* Wholly-owned subsidiary of Cboe Global Markets, Inc.
5. *Brief description of business or functions:* C2 is a registered national securities exchange.
6. *Copy of constitution:* Not applicable.
7. *Copy of articles of incorporation or association and amendments:* See attached amendment indicating the entity name change.
8. *Copy of existing by-laws:* See attached for Ninth Amended and Restated By-laws.
9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions:*

Current Directors

- Ed Tilly
- James Boris
- Frank English
- William Farrow
- Ed Fitzpatrick
- Janet Froetscher
- Jill Goodman
- Chris Mitchell
- Roderick Palmore
- Joe Ratterman
- Michael Richter
- Samuel Skinner
- Carole Stone
- Eugene Sunshine

Current Officers

- Alexandra Albright (Chief Compliance Officer)
- Lawrence Bresnahan (VP, Market & Member Reg.)

- Rodney Burt (VP, Infrastructure)
- Kevin Carrai (VP, Connectivity, Data & Member Services)
- Karen Christiansen (VP, Regulatory Systems Dev)
- Paul Ciciora (VP, Systems Infrastructure)
- Catherine Clay (VP, Business Development)
- Chris Concannon (President and COO)
- Pamela Culpepper (Chief HR Officer)
- Alan Dean (EVP, CFO and Treasurer)
- John Deters (CSO & Head Corp Initiative)
- James Enstrom (VP & Chief Audit Exec.)
- Angelo Evangelou (Deputy General Counsel)
- Eric Frait (VP, Business Analysis)
- Carmen Frazier Brannan (VP, Government Relations)
- Anders Franzon (SVP, Associate General Counsel)
- Todd Furney (VP, Chief Risk Officer)
- Alicia Goldberg (VP, Statistical Analysis)
- David Gray (VP, Business Develop GCS)
- Mark Hemsley (EVP, President Europe)
- Gregory Hoogasian (SVP, CRO of CBOE, C2 CFE)
- Chris Isaacson (EVP, CIO)
- Carol Kennedy (VP, & Chief Comm, Officer)
- Stephanie Klein (VP Chief Marketing Officer)
- Deborah Koopman (VP, Investor Relations)
- Jennifer Lamie (Chief Regulatory Advisor)
- Stephanie Lara Marrin (Deputy Chief Reg officer)
- Andrew Lowenthal (SVP, Business Development)
- Joanne Moffic-Silver (EVP, General Counsel & Corporate Secretary)
- Anthony Montesano (VP, Trading Operations)
- Matthew Moran (VP, Institutional Marketing)
- Mark Novak (VP, CTO Development)
- LuAnn O'Shea (VP Facilities)
- Donald Patton (VP, Acct/Controller)
- Debra Peters (VP, Options Institute)
- Roberta Piwnicki (VP, Systems Development)
- Kapil Rathi (SVP, Options Business Development)
- Arthur Reinstein (Deputy General Counsel)
- David Reynolds (VP, & Chief Accounting Ofc)
- James Roche (VP, Market Data Services)
- Bradley Samuels (VP, Systems Development)
- Brian Schell (SVP, Finance)
- Curt Schumacher (VP, CTO Operations)
- Derick Shupe (VP, Controller)
- John Sexton (Deputy General Counsel)
- Steven Sinclair (VP, Systems Development)

- Philip Slocum (EVP, Chief Risk Officer)
- Eileen Smith (VP, Systems Planning)
- William Speth (VP, Research & Prod. Dev.)
- Gregory Steinberg (VP, Associate General Counsel and Assistant Secretary)
- Paul Stephens (VP, Inst'l Mrktg & Sales)
- Edward Tilly (Chief Executive Officer)
- Michael Todd (VP, Systems Operations)
- Michael Todorofsky (VP, Market Operations)
- Michael Trees (VP, Trading Sys Develop.)
- Aaron Weissenfluh (VP, CISO)
- Laura Zinanni (VP, Office of CEO)

Standing Committees

Executive Committee

- Edward Tilly
- James Boris
- Edward Fitzpatrick
- Roderick Palmore
- Samuel Skinner
- Carole Stone
- Eugene Sunshine

Compensation Committee

- Samuel Skinner
- Frank English
- Janet Froetscher
- Eugene Sunshine

Nominating and Governance Committee

- Eugene Sunshine
- Jill Goodman
- Roderick Palmore
- Samuel Skinner
- Carole Stone

Regulatory Oversight and Compliance Committee

- Roderick Palmore
- William Farrow
- Janet Froetscher

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year:* Not applicable.

W. CBOE Futures Exchange, LLC

1. *Name:* CBOE Futures Exchange, LLC
Address: 400 South LaSalle Street, Chicago, Illinois 60605
2. *Form of organization:* Limited Liability Company.
3. *Name of state, statute under which organized and date of incorporation:*
Delaware, Delaware Limited Liability Company Act (6 Del. C. §18-101, et seq),
July 16, 2002.
4. *Brief description of nature and extent of affiliation:* Wholly-owned subsidiary of
Cboe Global Markets, Inc.
5. *Brief description of business or functions:* CBOE Future Exchanges, LLC is a
contract market approved by the Commodity Futures Trading Commission in
August 2003. CBOE Futures Exchange, LLC is a fully electronic futures
exchange.
6. *Copy of constitution:* Not applicable.
7. *Copy of articles of incorporation or association and amendments:* No changes.
8. *Copy of existing by-laws:* No changes.
9. *Name and title of present officers, governors, members of standing committees
and persons performing similar functions:*

Current Directors

- Ed Tilly
- Gilbert Bassett, Jr.
- Michael Gorham
- James Parisi
- Marc Schultz

Current Officers

- Alexandra Albright (Chief Compliance Officer)
- Lawrence Bresnahan (VP, Market & Member Reg.)
- Joseph Caauwe (Managing Director - CFE)
- Chris Concannon (President)
- Alan Dean (EVP, CFO and Treasurer)
- Gregory Hoogasian (SVP, CRO of CBOE C2, CFE)
- Chris Isaacson (EVP, CIO)
- Jennifer Lamie (Chief Regulatory Advisor)
- Stephanie Lara Marrin (Deputy Chief Reg Officer)
- Andrew Lowenthal (SVP, Business Development)
- Joanne Moffic-Silver (EVP, General Counsel & Corporate Secretary)

- Michael Mollet (Managing Director - CFE)
- Arthur Reinstein (Deputy General Counsel)
- David Reynolds (VP & Chief Accounting Ofc)

Standing Committees

Executive

- Ed Tilly
- Michael Gorham

Regulatory Oversight Committee

- Michael Gorham
- Gilbert Bassett
- James Parisi
- Marc Schultz

Trading Advisory Committee

- Jay Caauwe
- Kirk Bonniwell
- Zeke Charlesworth
- Michael Dennis
- Johan Drylewicz
- Alex Gerko
- Josh Grant
- Douglas Schadewald
- Andrew Smith

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year:* Not applicable.

X. CBOE Stock Exchange, LLC

1. *Name:* CBOE Stock Exchange, LLC ("CBSX")
Address: 400 South LaSalle Street, Chicago, Illinois 60605
2. *Form of organization:* Limited Liability Company.
3. *Name of state, statute under which organized and date of incorporation:*
Delaware, Delaware Limited Liability Company Act (6 Del. C. §18-101, et seq),
July 31, 2006.
4. *Brief description of nature and extent of affiliation:* CBSX is a 49.96%-owned subsidiary of Cboe Exchange, Inc.
5. *Brief description of business or functions:* CBSX operated the CBOE Stock Exchange, which acted as a trading market for securities other than options as a facility of CBOE. CBSX was approved by the SEC in March 2007. CBSX ceased trading operations on April 30, 2014.
6. *Copy of constitution:* Not applicable.
7. *Copy of articles of incorporation or association and amendments:* No changes.
8. *Copy of existing by-laws:* No changes.
9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions:*

Current Directors

- Alan Dean
- James Fitzgibbons
- Jaap Gelderloos
- Andrew Lowenthal
- Tom O'Mara
- Rick Oscher
- John Deters
- Dave Reynolds
- Eric Frait
- Steve Sosnick

Current Officers

- Angelo Evangelou (Secretary)

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year:* Not applicable.

Y. Cboe Exchange, Inc.

1. *Name:* Cboe Exchange, Inc.
Address: 400 South LaSalle Street, Chicago, Illinois 60605
2. *Form of organization:* Corporation.
3. *Name of state, statute under which organized and date of incorporation:*
Delaware, Delaware General Corporation Law (8 Del. C. § 101, et seq), February 8, 1972.
4. *Brief description of nature and extent of affiliation:* Wholly-owned subsidiary of Cboe Global Markets, Inc.
5. *Brief description of business or functions:* CBOE is a registered national securities exchange.
6. *Copy of constitution:* Not applicable.
7. *Copy of articles of incorporation or association and amendments:* See attached amendment indicating the entity name change.
8. *Copy of existing by-laws:* See attached for Ninth Amended and Restated By-laws.
9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions:*

Current Directors

- Ed Tilly
- James Boris
- Frank English
- William Farrow
- Ed Fitzpatrick
- Janet Froetscher
- Jill Goodman
- Chris Mitchell
- Roderick Palmore
- Joe Ratterman
- Michael Richter
- Samuel Skinner
- Carole Stone
- Eugene Sunshine

Current Officers

- Alexandra Albright (Chief Compliance Officer)
- Lawrence Bresnahan (VP, Market & Member Reg.)
- Rodney Burt (VP, Infrastructure)

- Kevin Carrai (VP, Connectivity, Data & Member Services)
- Karen Christiansen (VP, Regulatory Systems Dev)
- Paul Ciciora (VP, Systems Infrastructure)
- Catherine Clay (VP, Business Development)
- Chris Concannon (President and COO)
- Pamela Culpepper (Chief HR Officer)
- Alan Dean (EVP, CFO and Treasurer)
- John Deters (CSO & Head Corp Initiative)
- James Enstrom (VP, & Chief Audit Exec)
- Angelo Evangelou (Deputy General Counsel)
- Eric Frait (VP, Business Analysis)
- Carmen Frazier Brannan (VP, Government Relations)
- Anders Franzon (SVP, Associate General Counsel)
- Todd Furney (VP, Chief Risk Officer)
- Alicia Goldberg (VP, Statistical Analysis)
- David Gray (VP, Business Develop GCS)
- Mark Hemsley (EVP, President Europe)
- Gregory Hoogasian (SVP, CRO of CBOE C2 CFE)
- Chris Isaacson (EVP, CIO)
- Carol Kennedy (VP & Chief Comm. Officer)
- Stephanie Klein (VP Chief Marketing Officer)
- Deborah Koopman (VP, Investor Relations)
- Jennifer Lamie (Chief Regulatory Advisor)
- Stephanie Lara Marrin (Deputy Chief Reg Officer)
- Andrew Lowenthal (SVP, Business Development)
- Joanne Moffic-Silver (EVP, General Counsel & Corporate Secretary)
- Anthony Montesano (VP, Trading Operations)
- Matthew Moran (VP, Institutional Marketing)
- Mark Novak (VP, CTO Development)
- LuAnn O'Shea (VP Facilities)
- Donald Patton (VP, Acct/Controller)
- Debra Peters (VP, Options Institute)
- Roberta Piwnicki (VP, Systems Development)
- Kapil Rathi (SVP, Options Business Development)
- Arthur Reinstein (Deputy General Counsel)
- David Reynolds (VP, & Chief Accounting Ofc)
- James Roche (VP, Market Data Services)
- Bradley Samuels (VP, Systems Development)
- Brian Schell (SVP, Finance)
- Curt Schumacher (VP, CTO Operations)
- Derick Shupe (VP, Controller)
- John Sexton (Deputy General Counsel)
- Steven Sinclair (VP, Systems Development)
- Philip Slocum (EVP, Chief Risk Officer)

- Eileen Smith (VP, Systems Planning)
- William Speth (VP, Research & Product Development)
- Gregory Steinberg (VP, Associate General Counsel and Assistant Secretary)
- Paul Stephens (VP, Inst'l Mrktg & Sales)
- Edward Tilly (Chief Executive Officer)
- Michael Todd (VP, Systems Operations)
- Michael Todorofsky (VP, Market Operations)
- Michael Trees (VP, Trading Sys Develop.)
- Aaron Weissenfluh (VP, CISO)
- Laura Zinanni (VP Office of CEO)

Standing Committees

Executive Committee

- Ed Tilly
- James Boris
- Edward Fitzpatrick
- Roderick Palmore
- Samuel Skinner
- Carole Stone
- Eugene Sunshine

Compensation Committee

- Samuel Skinner
- Frank English
- Janet Froetscher
- Eugene Sunshine

Nominating and Governance Committee

- Eugene Sunshine
- Jill Goodman
- Roderick Palmore
- Samuel Skinner
- Carole Stone

Regulatory Oversight and Compliance Committee

- Roderick Palmore
- William Farrow
- Janet Froetscher

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year:* Not applicable.

Z. Cboe Building Corporation

1. *Name:* Cboe Building Corporation
Address: 400 South LaSalle Street, Chicago, Illinois 60605
2. *Form of organization:* Corporation.
3. *Name of state, statute under which organized and date of incorporation:*
Delaware, Delaware General Corporation Law (8 Del. C. § 101, et seq), August 8, 1980.
4. *Brief description of nature and extent of affiliation:* Wholly-owned subsidiary of Cboe Global Markets, Inc.
5. *Brief description of business or functions:* Owns facility used by Cboe.
6. *Copy of constitution:* Not applicable.
7. *Copy of articles of incorporation or association and amendments:* See attached amendment indicating the entity name change.
8. *Copy of existing by-laws:* No changes.
9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions:*

Current Directors

- Alan Dean
- Chris Concannon
- Ed Tilly

Current Officers

- Chris Concannon (President)
 - Alan Dean (Treasurer)
 - LuAnn O'Shea (Secretary)
10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year:* Not applicable.

AA. CBOE, LLC

1. *Name:* CBOE, LLC
Address: 400 South LaSalle Street, Chicago, Illinois 60605
2. *Form of organization:* Limited Liability Company.
3. *Name of state, statute under which organized and date of incorporation:*
Delaware, Delaware Limited Liability Company Act (6 Del. C. §18-101, et seq),
August 22, 2001.
4. *Brief description of nature and extent of affiliation:* Wholly-owned subsidiary of
Cboe Global Markets, Inc.
5. *Brief description of business or functions:* CBOE, LLC is a limited liability
company member of OneChicago, LLC.
6. *Copy of constitution:* Not applicable.
7. *Copy of articles of incorporation or association and amendments:* No changes.
8. *Copy of existing by-laws:* No changes.
9. *Name and title of present officers, governors, members of standing committees
and persons performing similar functions:*

Current Directors

- Chris Concannon
- Ed Tilly

Current Officers

- Chris Concannon (President)
- Andrew Lowenthal (Vice President)
- Alan Dean (Treasurer)
- Joanne Moffic-Silver (Secretary)

10. *Indication of whether such business or organization ceased to be associated with
the applicant during previous year:* Not applicable.

BB. CBOE III, LLC

1. *Name:* CBOE III, LLC
Address: 400 South LaSalle Street, Chicago, Illinois 60605
2. *Form of organization:* Limited Liability Company.
3. *Name of state, statute under which organized and date of incorporation:*
Delaware, Delaware Limited Liability Company Act (6 Del. C. §18-101, et seq),
May 2, 2014.
4. *Brief description of nature and extent of affiliation:* Wholly-owned subsidiary of
Cboe Global Markets, Inc.
5. *Brief description of business or functions:* Holding company for investment in
Tradelegs, LLC.
6. *Copy of constitution:* Not applicable.
7. *Copy of articles of incorporation or association and amendments:* No changes.
8. *Copy of existing by-laws:* No changes.
9. *Name and title of present officers, governors, members of standing committees
and persons performing similar functions:*

Current Directors

- John Deters
- Chris Concannon
- Ed Tilly

Current Officers

- Chris Concannon (President)
- John Deters (Vice President)
- Alan Dean (Treasurer)
- Joanne Moffic-Silver (Secretary)

10. *Indication of whether such business or organization ceased to be associated with
the applicant during previous year:* Not applicable.

CC. Cboe Bats, LLC

1. *Name:* Cboe Bats, LLC
Address: 400 South LaSalle Street, Chicago, Illinois 60605
2. *Form of organization:* Limited Liability Company.
3. *Name of state, statute under which organized and date of incorporation:*
Delaware, Delaware Limited Liability Company Act (6 Del. C. §18-101, et seq),
September 25, 2016.
4. *Brief description of nature and extent of affiliation:* Wholly-owned subsidiary of
Cboe Global Markets, Inc.
5. *Brief description of business or functions:* Holding company.
6. *Copy of constitution:* Not applicable.
7. *Copy of articles of incorporation or association and amendments:* See attached
amendment indicating the entity name change.
8. *Copy of existing by-laws:* No changes.
9. *Name and title of present officers, governors, members of standing committees
and persons performing similar functions:*

Current Directors

- Alan Dean
- Chris Concannon
- Ed Tilly

Current Officers

- Chris Concannon (President)
- Bryan Harkins (Senior Vice President)
- John Deters (Vice President)
- Chris Isaacson (Vice President)
- Brian Schell (Vice President)
- Alan Dean (Treasurer)
- Joanne Moffic-Silver (Secretary)

10. *Indication of whether such business or organization ceased to be associated with
the applicant during previous year:* Not applicable.

DD. CBOE Livevol, LLC

1. *Name:* CBOE Livevol, LLC
Address: 400 South LaSalle Street, Chicago, Illinois 60605
2. *Form of organization:* Limited Liability Company.
3. *Name of state, statute under which organized and date of incorporation:*
Delaware, Delaware Limited Liability Company Act (6 Del. C. §18-101, et seq),
May 29, 2015.
4. *Brief description of nature and extent of affiliation:* Wholly-owned subsidiary of
Cboe Global Markets, Inc.
5. *Brief description of business or functions:* CBOE Livevol, LLC provides equity
and index options technology for professional and retail traders, which includes
options strategy backtesting, trade analysis and volatility modeling technologies
and historical data.
6. *Copy of constitution:* Not applicable.
7. *Copy of articles of incorporation or association and amendments:* No changes.
8. *Copy of existing by-laws:* No changes.
9. *Name and title of present officers, governors, members of standing committees
and persons performing similar functions:*

Current Directors

- Andrew Lowenthal
- John Deters
- Catherine Clay

Current Officers

- John Deters (President)
- Andrew Lowenthal (Vice President)
- Catherine Clay (Vice President)
- Chris Isaacson (Vice President)
- Dave Reynolds (Treasurer)
- Joanne Moffic-Silver (Secretary)

10. *Indication of whether such business or organization ceased to be associated with
the applicant during previous year:* Not applicable.

EE. Cboe UK Limited

1. *Name:* Cboe UK Limited
Address: Level 30, The Leadenhall Building, 122 Leadenhall Street, London, United Kingdom EC3V 4AB
2. *Form of organization:* Private Limited Company.
3. *Name of state, statute under which organized and date of incorporation:* England and Wales, Companies Act 2006, March 10, 2016.
4. *Brief description of nature and extent of affiliation:* Wholly-owned subsidiary of Cboe Global Markets, Inc.
5. *Brief description of business or functions:* Marketing and business development services.
6. *Copy of constitution:* Not applicable.
7. *Copy of articles of incorporation or association and amendments:* See attached amendment indicating the entity name change.
8. *Copy of existing by-laws:* No changes.
9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions:*

Current Directors

- None

Current Officers

- Dave Gray

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year:* Not applicable.

FF. CBOE Vest, LLC

1. *Name:* CBOE Vest, LLC
Address: 400 South LaSalle Street, Chicago, Illinois 60605
2. *Form of organization:* Limited Liability Company.
3. *Name of state, statute under which organized and date of incorporation:*
Delaware, Delaware Limited Liability Company Act (6 Del. C. §18-101, et seq),
December 10, 2015.
4. *Brief description of nature and extent of affiliation:* Wholly-owned subsidiary of
Cboe Global Markets, Inc.
5. *Brief description of business or functions:* Holding company of majority equity
investment in Vest Financial Group, Inc.
6. *Copy of constitution:* Not applicable.
7. *Copy of articles of incorporation or association and amendments:* No changes.
8. *Copy of existing by-laws:* No changes.
9. *Name and title of present officers, governors, members of standing committees
and persons performing similar functions:*

Current Directors

- John Deters
- Chris Concannon
- Ed Tilly

Current Officers

- Chris Concannon (President)
- John Deters (Vice President)
- Alan Dean (Treasurer)
- Joanne Moffic-Silver (Secretary)

10. *Indication of whether such business or organization ceased to be associated with
the applicant during previous year:* Not applicable.

GG. Loan Markets, LLC

1. *Name:* Loan Markets, LLC
Address: 400 S. LaSalle Street, Chicago, Illinois 60605
2. *Form of organization:* Limited Liability Company.
3. *Name of state, statute under which organized and date of incorporation:*
Delaware, Delaware Limited Liability Company Act (6 Del. C. §18-101, et seq),
May 11, 2015.
4. *Brief description of nature and extent of affiliation:* Wholly-owned subsidiary of
Cboe Global Markets, Inc.
5. *Brief description of business or functions:* Holding company for investment in
American Financial Exchange, LLC.
6. *Copy of constitution:* Not applicable.
7. *Copy of articles of incorporation or association and amendments:* No changes.
8. *Copy of existing by-laws:* No changes.
9. *Name and title of present officers, governors, members of standing committees
and persons performing similar functions:*

Current Directors

- John Deters
- Chris Concannon
- Ed Tilly

Current Officers

- Chris Concannon (President)
- John Deters (Vice President)
- Alan Dean (Treasurer)
- Joanne Moffic-Silver (Secretary)

10. *Indication of whether such business or organization ceased to be associated with
the applicant during previous year:* Not applicable.

HH. Cboe Data Services, LLC

1. *Name:* Cboe Data Services, LLC
Address: 400 South LaSalle Street Chicago, Illinois 60605
2. *Form of organization:* Limited Liability Company.
3. *Name of state, statute under which organized and date of incorporation:*
Delaware, Delaware Limited Liability Company Act (6 Del. C. §18-101, et seq),
February 21, 2006.
4. *Brief description of nature and extent of affiliation:* Wholly-owned subsidiary of
Cboe Global Markets, Inc.
5. *Brief description of business or functions:* Cboe Data Services, LLC sells market
data.
6. *Copy of constitution:* Not applicable.
7. *Copy of articles of incorporation or association and amendments:* See attached
amendment indicating the entity name change.
8. *Copy of existing by-laws:* No changes.
9. *Name and title of present officers, governors, members of standing committees
and persons performing similar functions:*

Current Directors

- Eric Frait
- Bryan Harkins
- Chris Isaacson
- Jim Roche
- Curt Schumacher

Current Officers

- Chris Isaacson (President)
- Bryan Harkins (Senior Vice President)
- Kevin Carrai (Vice President)
- Jim Roche (Vice President)
- Alan Dean (Treasurer)
- Joanne Moffic-Silver (Secretary)

10. *Indication of whether such business or organization ceased to be associated with
the applicant during previous year:* Not applicable.

II. Signal Trading Systems, LLC

1. *Name:* Signal Trading Systems, LLC (“STS”)
Address: 400 South LaSalle Street, Chicago, Illinois 60605
2. *Form of organization:* Limited Liability Company.
3. *Name of state, statute under which organized and date of incorporation:*
Delaware, Delaware Limited Liability Company Act (6 Del. C. §18-101, et seq),
May 13, 2010.
4. *Brief description of nature and extent of affiliation:* Fifty percent (50%)
subsidiary of Cboe Exchange, Inc.
5. *Brief description of business or functions:* STS developed and markets a multi-
asset front-end order entry system known as “Pulse”.
6. *Copy of constitution:* Not applicable.
7. *Copy of articles of incorporation or association and amendments:* No changes.
8. *Copy of existing by-laws:* No changes.
9. *Name and title of present officers, governors, members of standing committees
and persons performing similar functions:* There are no directors or officers of
Signal Trading Systems, LLC.
10. *Indication of whether such business or organization ceased to be associated with
the applicant during previous year:* Not applicable.

JJ. The Options Exchange, Incorporated

1. *Name:* The Options Exchange, Incorporated
Address: 400 South LaSalle Street, Chicago, IL 60605
2. *Form of organization:* Corporation.
3. *Name of state, statute under which organized and date of incorporation:*
Delaware, Delaware General Corporation Law (8 Del. C. § 101, et seq), January 7, 1974.
4. *Brief description of nature and extent of affiliation:* Wholly-owned subsidiary of Cboe Global Markets, Inc.
5. *Brief description of business or functions:* The Options Exchange, Incorporated has been inactive since its incorporation.
6. *Copy of constitution:* Not applicable.
7. *Copy of articles of incorporation or association and amendments:* No changes.
8. *Copy of existing by-laws:* No changes.
9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions:*

Current Directors

- Alan Dean
- Chris Concannon
- Ed Tilly

Current Officers

- Ed Tilly (Chairman)
- Chris Concannon (President)
- Alan Dean (Treasurer)
- Joanne Moffic-Silver (Secretary)

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year:* Not applicable.

KK. Vest Financial Group, Inc.

1. *Name:* Vest Financial Group, Inc.
Address: 8300 Greensboro Drive, 8th Floor, McLean, VA 22102
2. *Form of organization:* Corporation.
3. *Name of state, statute under which organized and date of incorporation:*
Delaware, Delaware General Corporation Law (8 Del. C. §101, et seq), January 2, 2015.
4. *Brief description of nature and extent of affiliation:* Majority-owned subsidiary of CBOE Vest, LLC.
5. *Brief description of business or functions:* Through its subsidiaries, provides options-based investment advisory services.
6. *Copy of constitution:* Not applicable.
7. *Copy of articles of incorporation or association and amendments:* No changes.
8. *Copy of existing by-laws:* No changes.
9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions:*

Current Directors

- John Deters
- Karan Sood
- William Speth

Current Officers

- Karan Sood (Chief Executive Officer)
- Jeffrey Chang (Chief Financial Officer)

10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year:* Not applicable.

LL. Cboe Hong Kong Limited

1. *Name:* Cboe Hong Kong Limited
Address: 6th Floor, Alexandra House, 18 Chater Road, Central, Hong Kong
2. *Form of organization:* Private Company Limited by Shares.
3. *Name of state, statute under which organized and date of incorporation:* Hong Kong under the Companies Ordinance (Chapter 622 of the Laws of Hong Kong), May 29, 2017.
4. *Brief description of nature and extent of affiliation:* Cboe Hong Kong Limited is wholly-owned by Bats Worldwide Holdings Limited, which is an affiliate of the Exchange.
5. *Brief description of business or functions:* Marketing and business development services (business expected to commence in September 2017).
6. *Copy of constitution:* Not applicable.
7. *Copy of articles of incorporation or association and amendments:* See attached amendment indicating the entity name change.
8. *Copy of existing by-laws:* Not applicable.
9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions:*

Current Directors
 - Dave Gray
Current Officers
10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year:* Not applicable.

MM. Bats Hotspot SEF LLC

1. *Name:* Bats Hotspot SEF LLC
Address: 8050 Marshall Dr., Ste. 120, Lenexa, KS 66214
2. *Form of organization:* Limited Liability Company.
3. *Name of state, statute under which organized and date of incorporation:* Formed in Delaware under Section 201 of the Limited Liability Company Act of the State of Delaware on May 1, 2015.
4. *Brief description of nature and extent of affiliation:* As of August 18, 2016, Bats Hotspot SEF LLC ceased to exist.
5. *Brief description of business or functions:* Not applicable.
6. *Copy of constitution:* Not applicable.
7. *Copy of articles of incorporation or association and amendments:* Not applicable.
8. *Copy of existing by-laws:* Not applicable
9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions:* None.
10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year:* As of August 18, 2016, Bats Hotspot SEF LLC ceased to exist.

NN. Bats Global Markets, Inc.

1. *Name:* Bats Global Markets, Inc.
Address: 8050 Marshall Dr., Ste. 120, Lenexa, KS 66214
2. *Form of organization:* Corporation.
3. *Name of state, statute under which organized and date of incorporation:*
Incorporated in Delaware under Section 101 of the General Corporation Law of the State of Delaware on August 22, 2013.
4. *Brief description of nature and extent of affiliation:* On February 28, 2017, Bats Global Markets, Inc. was merged with and into Cboe Bats, LLC, with Cboe Bats, LLC as the surviving corporation.
5. *Brief description of business or functions:* Not applicable.
6. *Copy of constitution:* Not applicable.
7. *Copy of articles of incorporation or association and amendments:* Not applicable.
8. *Copy of existing by-laws:* Not applicable.
9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions:* None.
10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year:* As of February 28, 2017, Bats Global Markets, Inc. ceased to exist.

OO. DerivaTech Corporation

1. *Name:* DerivaTech Corporation
Address:
2. *Form of organization:* Corporation.
3. *Name of state, statute under which organized and date of incorporation:*
4. *Brief description of nature and extent of affiliation:* DerivaTech Corporation, a previously wholly-owned subsidiary of CBOE Holdings, was dissolved on December 22, 2016.
5. *Brief description of business or functions:* Not applicable.
6. *Copy of constitution:* Not applicable.
7. *Copy of articles of incorporation or association and amendments:* Not applicable.
8. *Copy of existing by-laws:* Not applicable.
9. *Name and title of present officers, governors, members of standing committees and persons performing similar functions:* None.
10. *Indication of whether such business or organization ceased to be associated with the applicant during previous year:* DerivaTech Corporation, a previously wholly-owned subsidiary of CBOE Holdings, was dissolved on December 22, 2016.

Form 1, Exhibit C Index of Attachments

- A Bats Global Markets Holdings, Inc.
- B Direct Edge LLC
- C Cboe BZX Exchange, Inc. (Updated)
- D Cboe BYX Exchange, Inc. (Updated)
- E Cboe EDGX Exchange, Inc. (Updated)
- F Cboe Trading, Inc. (Updated)
- G Omicron Acquisition Corp.
- H Cboe FX Holdings, LLC (Updated)
- I Cboe FX Markets, LLC (Updated)
- J Cboe FX Services, LLC (Updated)
- K Bats International Holdings Limited
- L Cboe FX Europe Limited (Updated)
- M Bats Hotspot Asia Pte. Ltd.
- N Bats Trading Limited
- O Chi-X Europe Limited
- P Cboe ETF.com, Inc. (Updated)
- Q INDEXPUBS S.A.
- R Bats Hotspot IB LLC
- S Bats Hotspot SEF LLC
- T Bats Worldwide Holdings Limited
- U Cboe Global Markets, Inc. (Updated)
- V Cboe C2 Exchange, Inc. (Updated)
- W CBOE Futures Exchange, LLC
- X CBOE Stock Exchange, LLC
- Y Cboe Exchange, Incc (Updated)
- Z Cboe Building Corporation (Updated)

- AA CBOE, LLC
- BB CBOE III, LLC
- CC Cboe Bats, LLC (Updated)
- DD CBOE Livevol, LLC
- EE Cboe UK Limited (Updated)
- FF CBOE Vest, LLC
- GG Loan Markets, LLC
- HH Cboe Data Services, LLC (Updated)
- II Signal Trading Systems, LLC
- JJ The Options Exchange, Incorporated
- KK Vest Financial Group, Inc.
- LL Cboe Hong Kong Limited (Updated)

A Bats Global Markets Holdings, Inc.

B Direct Edge LLC

C Cboe BZX Exchange, Inc.

Delaware

The First State

Page 1

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE RESTATED CERTIFICATE OF "BATS BZX EXCHANGE, INC.", CHANGING ITS NAME FROM "BATS BZX EXCHANGE, INC." TO "CBOE BZX EXCHANGE, INC.", FILED IN THIS OFFICE ON THE SIXTEENTH DAY OF OCTOBER, A.D. 2017, AT 10:13 O'CLOCK P.M.

A FILED COPY OF THIS CERTIFICATE HAS BEEN FORWARDED TO THE NEW CASTLE COUNTY RECORDER OF DEEDS.



4450647 8100
SR# 20176643028

You may verify this certificate online at corp.delaware.gov/authver.shtml

A handwritten signature in black ink, appearing to read "JWB", is written over a horizontal line. Below the line, the text "Jeffrey W. Bullock, Secretary of State" is printed.

Jeffrey W. Bullock, Secretary of State

Authentication: 203408847
Date: 10-17-17

**SECOND AMENDED AND RESTATED
CERTIFICATE OF INCORPORATION
of
BATS BZX EXCHANGE, INC.**

The corporation filed its original Certificate of Incorporation with the Secretary of State of the State of Delaware on November 1, 2007 under the name BATS Exchange, Inc. This Second Amended and Restated Certificate of Incorporation of the corporation, which only restates and integrates and does not further amend (except as permitted under Section 242(a)(1) of the General Corporation Law of the State of Delaware in order to change the name of the corporation) the provisions of the corporation's Amended and Restated Certificate of Incorporation, was duly adopted by the Board of Directors of the corporation in accordance with the provisions of Sections 242(b)(1) and 245 of the General Corporation Law of the State of Delaware. The Amended and Restated Certificate of Incorporation of the corporation is hereby amended, integrated and restated to read in its entirety as follows:

FIRST: The name of the corporation (the "Corporation") is Cboe BZX Exchange, Inc.

SECOND: The address of the registered office of the Corporation in the State of Delaware is Corporation Trust Center, 1209 Orange Street, in the City of Wilmington, County of New Castle, Delaware 19801-1297. The name of the Corporation's registered agent at such address shall be The Corporation Trust Company.

THIRD: The nature of the business or purposes to be conducted or promoted by the Corporation is:

(a) To conduct and carry on the function of an "exchange" within the meaning of that term in the Securities Exchange Act of 1934, as amended (the "Act");

(b) To provide a securities market place with high standards of honor and integrity among its Exchange Members and other persons holding rights to access the Corporation's facilities and to promote and maintain just and equitable principles of trade and business. The term "Exchange Member" shall have the meaning given to that term in Section 1.1 of the Corporation's Bylaws, as the same may be amended from time to time (the "Corporation's Bylaws"); and

(c) To engage in any other lawful act or activity for which corporations may be organized under the General Corporation Law of the State of Delaware ("GCL").

FOURTH: The total number of shares of stock which the Corporation shall have authority to issue is one thousand (1,000) shares of common stock having a par value of \$0.01 per share (the "Common Stock"). Bats Global Markets Holdings, Inc. will be the sole owner of the Common Stock. Any sale, transfer or assignment by Bats Global Markets Holdings, Inc. of any shares of Common Stock will be subject to prior approval by the Securities and Exchange Commission (the "Commission") pursuant to the rule filing procedure under Section 19 of the Act.

FIFTH: (a) The governing body of the Corporation shall be its Board of Directors. The business and affairs of the Corporation shall be managed by or under the direction of the Board of Directors.

(b) The Board of Directors of the Corporation shall consist of not less than 5 directors, the exact number to be fixed in accordance with the Corporation's Bylaws.

(c) Only persons who are nominated by the Nominating and Governance Committee shall be eligible for election as directors. The Nominating and Governance Committee shall be bound to accept and nominate (a) the individual(s) recommended by the Representative Director Nominating Body (as defined in the Corporation's Bylaws) for nomination as Representative Director (as defined in the Corporation's Bylaws), provided that the individuals so nominated by the Representative Director Nominating Body are not opposed by a petition candidate or (b) the individual(s) who receive the most votes pursuant to a petition election as set forth in Section 3.2 of the Corporation's Bylaws; provided, however, that any individual(s) recommended by the Representative Director Nominating Body and any individual(s) who are petition candidates pursuant to clause (b) of the preceding sentence shall satisfy the compositional requirements determined by the Board of Directors from time to time pursuant to a resolution adopted by the Board in accordance with Section 3.1 of the Corporation's Bylaws, designating the number of Representative Directors that are Non-Industry Directors and Industry Directors (if any), as such terms are defined in the Corporation's Bylaws; and provided further, that the Board of Directors and/or Nominating and Governance Committee, as applicable, shall make such determinations as to whether a director candidate satisfies applicable qualifications for election as a director pursuant to and in accordance with Section 3.1 of the Corporation's Bylaws.

(d) In discharging his or her responsibilities as a member of the Board of Directors, and to the fullest extent permitted by law, each director shall take into consideration the effect that his or her actions would have on the ability of the Corporation to carry out the Corporation's responsibilities under the Act and on the ability of the Corporation: to engage in conduct that fosters and does not interfere with the Corporation's ability to prevent fraudulent and manipulative acts and practices; to promote just and equitable principles of trade; to foster cooperation and coordination with persons engaged in regulating, clearing, settling, processing information with respect to, and facilitating transactions in securities; to remove impediments to and perfect the mechanisms of a free and open market and a national market system; and, in general, to protect investors and the public interest. In discharging his or her responsibilities as a member of the Board of Directors or as an officer or employee of the Corporation, each such director, officer or employee shall comply with the federal securities laws and the rules and regulations thereunder and shall cooperate with the Commission, and the Corporation pursuant to its regulatory authority.

SIXTH: (a) The Corporation shall, to the fullest extent permitted by applicable law as it presently exists or may hereafter be amended, indemnify and hold harmless any person (a "Covered Person") who was or is made or is threatened to be made a party or is otherwise involved in any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (a "proceeding"), by reason of the fact that he or she is or was a director, officer or member of a committee of the Corporation, or, while a director or officer of the Corporation, is or was serving at the request of the Corporation as a director or officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise or non-profit entity, including service with respect to employee benefit plans, against all liability and loss suffered and expenses (including attorneys' fees), judgment, fines and amounts paid in settlement actually and reasonably incurred by such Covered Person in connection with a proceeding. Notwithstanding the preceding sentence, except as otherwise

provided in Section (c) of this Article Sixth, the Corporation shall be required to indemnify a Covered Person in connection with a proceeding (or part thereof) commenced by such Covered Person only if the commencement of such proceeding (or part thereof) by the Covered Person was authorized in the specific case by the Board of Directors of the Corporation.

(b) Expenses (including attorneys' fees) incurred by a Covered Person in defending a proceeding, including appeals, shall, to the extent not prohibited by law, be paid by the Corporation in advance of the final disposition of such proceeding; provided, however, that the Corporation shall not be required to advance any expenses to a person against whom the Corporation directly brings an action, suit or proceeding alleging that such person (1) committed an act or omission not in good faith or (2) committed an act of intentional misconduct or a knowing violation of law. Additionally, an advancement of expenses incurred by a Covered Person shall be made only upon delivery to the Corporation of an undertaking, by or on behalf of such Covered Person, to repay all amounts so advanced if it shall ultimately be determined by final judicial decision from which there is no further right to appeal or otherwise in accordance with Delaware law that such Covered Person is not entitled to be indemnified for such expenses under this Article Sixth.

(c) If a claim for indemnification (following the final disposition of such action, suit or proceeding) or advancement of expenses under this Article Sixth is not paid in full within thirty days after a written claim therefor by the Covered Person has been received by the Corporation, the Covered Person may file suit to recover the unpaid amount of such claim and, if successful in whole or in part, shall be entitled to be paid the expense of prosecuting such claim to the fullest extent permitted by law. In any action the Corporation shall have the burden of proving that the Covered Person is not entitled to the requested indemnification or advancement of expenses under applicable law.

(d) The provisions of this Article Sixth shall be deemed to be a contract between the Corporation and each Covered Person who serves in any such capacity at any time while this Article Sixth is in effect, and any repeal or modification of any applicable law or of this Article Sixth shall not affect any rights or obligations then existing with respect to any state of facts then or theretofore existing or any action, suit or proceeding theretofore or thereafter brought or threatened based in whole or in part upon any such state of facts.

(e) Persons not expressly covered by the foregoing provisions of this Article Sixth, such as those (x) who are or were employees or agents of the Corporation, or are or were serving at the request of the Corporation as employees or agents of another corporation, partnership, joint venture, trust or other enterprise, or (y) who are or were directors, officers, employees or agents of a constituent corporation absorbed in a consolidation or merger in which the Corporation was the resulting or surviving corporation, or who are or were serving at the request of such constituent corporation as directors, officers, employees or agents of another corporation, partnership, joint venture, trust or other enterprise, may be indemnified or advanced expenses to the extent authorized at any time or from time to time by the Board of Directors.

(f) The rights conferred on any Covered Person by this Article Sixth shall not be deemed exclusive of any other rights to which such Covered Person may be entitled by law or otherwise, and shall continue as to a person who has ceased to be a director, officer, employee or agent and shall inure to the benefit of the heirs, executors and administrators of such person.

(g) The Corporation's obligation, if any, to indemnify or to advance expenses to any Covered Person who was or is serving at its request as a director, officer, employee or agent of another corporation, partnership, joint venture, trust, enterprise or nonprofit entity shall be reduced by any amount such Covered Person may collect as indemnification or advancement of expenses from such other corporation, partnership, joint venture, trust, enterprise or non-profit entity.

(h) Any repeal or modification of the foregoing provisions of this Article Sixth shall not adversely affect any right or protection hereunder of any Covered Person in respect of any act or omission occurring prior to the time of such repeal or modification.

(i) The Corporation may purchase and maintain insurance, at its expense, to protect itself and any director, manager, officer, trustee, employee or agent of the Corporation or another corporation, or of a partnership, limited liability company, joint venture, trust or other enterprise against any expense, liability or loss (as such terms are used in this Article Sixth), whether or not the Corporation would have the power to indemnify such person against such expense, liability or loss under the GCL.

SEVENTH: The Corporation reserves the right to amend this Certificate of Incorporation, and to change or repeal any provision of this Certificate of Incorporation, in the manner prescribed at the time by statute, and all rights conferred upon stockholders by this Certificate of Incorporation are granted subject to this reservation. Before any amendment to, or repeal of, any provision of this Certificate of Incorporation shall be effective, those changes shall be submitted to the Board of Directors of the Corporation and if such amendment or repeal must be filed with or filed with and approved by the Commission, then the proposed changes to this Certificate of Incorporation shall not become effective until filed with or filed with and approved by the Commission, as the case may be.

EIGHTH: A director of the Corporation shall not be liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director, except to the extent such exemption from liability or limitation thereof is not permitted under the GCL as the same exists or may hereafter be amended. Any amendment, modification or repeal of the foregoing sentence shall not adversely affect any right or protection of a director of the Corporation hereunder in respect of any act or omission occurring prior to the time of such amendment, modification or repeal.

NINTH: Unless and except to the extent that the Corporation's Bylaws shall so require, the election of directors of the Corporation need not be by written ballot.

TENTH: In furtherance and not in limitation of the powers conferred by the laws of the State of Delaware, the Board of Directors of the Corporation is expressly authorized to make, alter and repeal the Corporation's Bylaws.

ELEVENTH: To the fullest extent permitted by law, all confidential information pertaining to the self-regulatory function of the Corporation (including but not limited to disciplinary matters, trading data, trading practices and audit information) contained in the books and records of the Corporation shall: (i) not be made available to any persons other than to those officers, directors, employees and agents of the Corporation that have a reasonable need to know the contents thereof; (ii) be retained in confidence by the Corporation and the officers, directors, employees and agents of the Corporation; and (iii) not be used for any commercial purposes.

Nothing in this Article Eleventh shall be interpreted as to limit or impede the rights of the Commission to access and examine such confidential information pursuant to the federal securities laws and the rules and regulations thereunder, or to limit or impede the ability of any officers, directors, employees or agents of the Corporation to disclose such confidential information to the Commission.

IN WITNESS WHEREOF, BATS BZX Exchange, Inc. has caused this certificate to be signed as of this 16th day of October, 2017.

BATS BZX EXCHANGE, INC.

By: 

Name: Edward T. Tilly

Its: Chief Executive Officer

SEVENTH AMENDED AND RESTATED

BYLAWS OF

CBOE BZX EXCHANGE, INC.

ARTICLE I Definitions

Section 1.1. Definitions.

When used in these Bylaws, except as expressly otherwise provided or unless the context otherwise requires:

- (a) The term “Act” means the Securities Exchange Act of 1934, as amended.
- (b) The term “affiliate” of a Person or “affiliated with” another Person means a Person who, directly or indirectly, controls, is controlled by, or is under common control with, such other person.
- (c) The term “Board” means the Board of Directors of the Corporation.
- (d) The term “Corporation” means Cboe BZX Exchange, Inc.
- (e) The term “Exchange” means the Corporation, its exchange market and any facilities thereof.
- (f) The term “Exchange Member” shall have the same meaning as the term “Member” in the Rules of the Exchange.
- (g) The term “Person” shall mean an individual, partnership (general or limited), joint stock company, corporation, limited liability company, trust or unincorporated organization, or any governmental entity or agency or political subdivision thereof.
- (h) The term “Rules” means the rules of the Exchange as adopted or amended from time to time.
- (i) The term “associated with an entity” means any partner, officer or director of such entity (or any person occupying a similar status or performing similar functions), any person directly or indirectly controlling, controlled by, or under common control with such entity, or any employee of such entity.
- (j) The term “Representative Director Nominating Body” shall mean the Industry-Director Subcommittee of the Nominating and Governance Committee if there are at least two Industry Directors on the Nominating and Governance Committee. If the Nominating and Governance Committee has less than two Industry Directors, then the “Representative Director Nominating Body” shall mean the Exchange Member Subcommittee of the Advisory Board.

ARTICLE II Stockholders

Section 2.1. Place of Meetings.

All meetings of stockholders shall be held at such place within or without the State of Delaware as may be designated from time to time by the Board or the Chairman of the Board (or,

if there is no Chairman of the Board, the Chief Executive Officer) or, if not so designated, at the principal place of business of the Corporation in Chicago, Illinois.

Section 2.2. Annual Meetings.

If required by applicable law, an annual meeting of stockholders shall be held on the third Tuesday in May of each year or such other date as may be fixed by the Board, at such time as may be designated by the Secretary prior to the giving of notice of the meeting, for the purpose of electing directors to fill expiring terms and any vacancies in unexpired terms and for the transaction of business as may properly come before the meeting. In no event shall the annual meeting date each year be prior to the completion of the process for the nomination of the Representative Directors for that annual meeting as set forth in Sections 3.1 and 3.2.

Section 2.3. Special Meetings.

Special meetings of stockholders, for any purpose or purposes, unless otherwise prescribed by statute or by the Certificate of Incorporation of the Corporation, may be called by the Chairman of the Board or by a majority of the Board.

Section 2.4. Notice of Stockholders' Meetings.

Unless otherwise prescribed by statute or the Certificate of Incorporation, notice of each meeting of stockholders, stating the date, time and place thereof, and, in the case of special meetings, the purpose or purposes for which such meeting is called, shall be given to each stockholder of record entitled to vote thereat not more than 60 days and at least 10 days before the date of the meeting.

Section 2.5 Quorum and Adjournments.

Except as otherwise provided by statute or the Certificate of Incorporation, a majority of the outstanding stock of the Corporation entitled to vote at the meeting, when present in person or represented by proxy, shall constitute a quorum at all meetings of stockholders for the transaction of business. If such quorum shall not be present or represented by proxy at any meeting of stockholders, holders of a majority of the stock present in person or represented by proxy at the meeting shall have power to adjourn the meeting from time to time, without notice other than announcement at the meeting unless otherwise required by statute, until a quorum shall be present or represented. At any such adjourned meeting at which a quorum is present, any business may be transacted which might have been transacted at the meeting as originally notified. Nothing in these Bylaws shall affect the right to adjourn a meeting from time to time where a quorum is present.

Section 2.6. Voting by Stockholders.

With respect to any question brought before a meeting, when a quorum is present, a majority of the votes properly cast on any question shall decide the question, unless the question is one upon which by express provision of statute or the Certificate of Incorporation, a different vote is required, in which case such express provision shall govern and control. Notwithstanding the preceding sentence, a plurality of votes properly cast shall elect the directors.

Section 2.7. Determination of Stockholders of Record.

(a) The Board may fix a record date to determine the stockholders entitled to notice of and to vote at a meeting of stockholders or any adjournment thereof ("Record Date"). The Record Date shall not be more than 60 days nor less than 10 days before the date of the meeting.

(b) If no Record Date is fixed by the Board for a meeting of stockholders, the Record Date for the meeting shall be at the close of business on the day preceding the date on which notice of the meeting is given by the Corporation.

(c) A Record Date shall apply to any adjournment of a meeting of stockholders; provided, however, that the Board may fix a new Record Date for the adjourned meeting.

Section 2.8. Action by Written Consent of Stockholders.

Unless otherwise restricted by the Certificate of Incorporation, any corporate action upon which a vote of stockholders is required or permitted may be taken without a meeting, without prior notice and without a vote, if a consent in writing, setting forth the action so taken, shall be signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote on that matter were present and voted and shall be delivered to the Corporation in the manner required by law at its registered office within the State of Delaware or at its principal place of business or to an officer or agent of the Corporation having custody of the book in which proceedings of meetings of stockholders of the Corporation are recorded. Every written consent shall bear the date of signature of each stockholder who signs the consent and no written consent shall be effective to take the corporate action referred to in the consent unless, within 60 days of the earliest dated consent delivered to the Corporation, written consents signed by a sufficient number of holders to take action are delivered to the Corporation as required by these Bylaws or by applicable law. Prompt notice of the taking of the corporate action without a meeting by less than unanimous written consent shall be given to those stockholders who have not so consented in writing.

ARTICLE III Board of Directors

Section 3.1. Number, Election and Term of Office of Directors.

The Board shall consist of not less than 5 directors. The Board shall determine from time to time pursuant to resolution adopted by the Board the total number of directors, the number of Non-Industry Directors and Industry Directors (if any), and the number of Representative Directors that are Non-Industry Directors and Industry Directors (if any). In no event shall the number of Non-Industry Directors constitute less than the number of Industry Directors (excluding the Chief Executive Officer from the calculation of Industry Directors for such purpose). In addition, at all times at least 20% of directors serving on the Board shall be Representative Directors nominated (or otherwise selected through the petition process) as provided for in Section 3.2 by the Representative Director Nominating Body.

A "Non-Industry Director" is a person who is not an Industry Director.

An "Industry Director" is any director who (i) is an Exchange Member or otherwise subject to regulation by the Exchange; (ii) is a broker-dealer or an officer, director or employee of a

broker-dealer or has been in any such capacity within the prior three years; (iii) is, or was within the prior three years, associated with an entity that is affiliated with a broker-dealer whose revenues account for a material portion of the consolidated revenues of the entities with which the broker-dealer is affiliated; (iv) has a material ownership interest in a broker-dealer and has investments in broker-dealers that account for a material portion of the director's net worth; (v) has a consulting or employment relationship with or has provided professional services to the Exchange or any of its affiliates or has had such a relationship or has provided such services within the prior three years; or (vi) provides, or has provided within the prior three years, professional or consulting services to a broker-dealer, or to an entity with a 50% or greater ownership interest in a broker-dealer whose revenues account for a material portion of the consolidated revenues of the entities with which the broker-dealer is affiliated, and the revenue from all such professional or consulting services accounts for a material portion of either the revenues received by the director or the revenues received by the director's firm or partnership.

Notwithstanding the foregoing, a director shall not be deemed to be an "Industry Director" solely because either (A) the person is or was within the prior three years an outside director of a broker-dealer or an outside director of an entity that is affiliated with a broker-dealer, provided that the broker-dealer is not an Exchange Member or otherwise subject to regulation by the Exchange, or (B) the person is or was within the prior three years associated with an entity that is affiliated with a broker-dealer whose revenues do not account for a material portion of the consolidated revenues of the entities with which the broker-dealer is affiliated, provided that the broker-dealer is not an Exchange Member or otherwise subject to regulation by the Exchange. At all times, at least one Non-Industry Director shall be a Non-Industry Director exclusive of the exceptions provided for in the immediately preceding sentence and shall have no material business relationship with a broker or dealer or the Exchange or any of its affiliates. For purposes of this Section 3.1, the term "outside director" shall mean a director of an entity who is not an employee or officer (or any person occupying a similar status or performing similar functions) of such entity.

The Board of Directors of the Exchange or the Nominating and Governance Committee of the Board shall make all materiality determinations under the foregoing two paragraphs. A director shall qualify as a Non-Industry Director only so long as such director meets the requirements for that position.

Directors will serve one-year terms ending on the annual meeting following the meeting at which such directors were elected or at such time as their successors are elected or appointed and qualified, except in the event of earlier death, resignation, disqualification or removal.

Only persons who are nominated as Representative Directors by the Nominating and Governance Committee shall be eligible for election as Representative Directors. The Nominating and Governance Committee shall be bound to accept and nominate the Representative Director nominees recommended by the Representative Director Nominating Body, provided that the Representative Director nominees are not opposed by a petition candidate as forth in Section 3.2 below. If such Representative Director nominees are opposed by a petition candidate then the Nominating and Governance Committee shall be bound to accept and nominate the Representative Director nominees who receive the most votes pursuant to a Run-off Election as set forth in Section 3.2 below.

The Nominating and Governance Committee shall determine, subject to review by the Board, whether a director candidate satisfies the applicable qualifications for election as a director, and the decision of that committee shall, subject to review, if any, by the Board, be final.

Section 3.2. Nomination of Representative Directors.

The Representative Director Nominating Body shall recommend a number of directors that equals 20% of the total number of directors serving on the Board (the "Representative Director(s)"), provided that if 20% of the directors then serving on the Board is not a whole number, such number of Representative Directors shall be rounded up to the next whole number. Directors not recommended by the Representative Director Nominating Body shall be nominated by the Nominating and Governance Committee. Any person nominated by the Representative Director Nominating Body and any petition candidate nominated pursuant to this Section 3.2 shall satisfy the compositional requirements determined by the Board from time to time pursuant to a resolution adopted by the Board in accordance with Section 3.1, designating the number of Representative Directors that are Non-Industry Directors and Industry Directors (if any).

The Representative Director Nominating Body shall provide a mechanism for Exchange Members to provide input to the Representative Director Nominating Body with respect to nominees for the Representative Directors. The Representative Director Nominating Body shall issue a circular to Exchange Members identifying the Representative Director nominees selected by the Representative Director Nominating Body not earlier than December 1st and not later than January 15th, or the first business day thereafter if January 15th is not a business day.

Exchange Members may nominate alternative candidates for election to the Representative Director positions to be elected in a given year by submitting a petition signed by individuals representing not less than 10% of the Exchange Members at that time. Petitions must be filed with the Secretary no later than 5:00 p.m. (Chicago time) on the 10th business day following the issuance of the circular to the Exchange Members identifying the Representative Director nominees selected by the Representative Director Nominating Body (the "Petition Deadline"). The names of all Representative Director nominees recommended by the Representative Director Nominating Body and those selected pursuant to a valid and timely petition shall, immediately following their selection, be given to the Secretary who shall promptly issue a circular to all of the Exchange Members identifying all such Representative Director candidates.

If one or more valid petitions are received, the Secretary shall issue a circular to all of the Exchange Members identifying those individuals nominated for Representative Director by the Representative Director Nominating Body and those individuals nominated for Representative Director through the petition process as well as of the time and date of a run-off election to determine which individuals will be nominated as Representative Director(s) by the Nominating and Governance Committee (the "Run-off Election"). The Run-off Election will be held not more than 45 days after the Petition Deadline. In any Run-off Election, each Exchange Member shall have one vote for each Representative Director position to be filled that year; provided, however, that no Exchange Member, either alone or together with its affiliates, may account for more than 20% of the votes cast for a candidate, and any votes cast by an Exchange Member, either alone or together with its affiliates, in excess of this 20% limitation shall be disregarded. Votes may be cast in person or by proxy. Additionally, in any Run-off Election, one-third of the Exchange Members entitled to vote, when present in person or represented by proxy, shall

constitute a quorum for purposes of the Run-off Election. The Secretary shall issue a circular to all of the Exchange Members setting forth the results of the Run-off Election. The number of individual Representative Director nominees equal to the number of Representative Director positions to be filled that year receiving the largest number of votes in the Run-off Election (after taking into account the voting limitation set forth herein) will be the persons approved by the Exchange Members to be nominated as the Representative Director(s) by the Nominating and Governance Committee for that year.

Section 3.3. Powers of the Board.

The Board shall be the governing body of the Corporation and shall be vested with all powers necessary for the management of the business and affairs of the Corporation and for the promotion of its welfare, objects and purposes. The Board shall regulate the business conduct of Exchange Members and may exercise all such powers of the Corporation and do all such lawful acts and things as are not by statute or the Certificate of Incorporation directed or required to be exercised or done by others. In the exercise of such powers, the Board may organize such subsidiary corporations, impose such fees and charges, adopt or amend such Rules, issue such orders and directions, and make such decisions as it deems necessary or appropriate. It may prescribe and impose penalties for violations of the Rules, for neglect or refusal to comply with orders, directions or decisions of the Board, or for any other offenses against the Corporation.

Section 3.4. Resignation, Disqualification and Removal of Directors.

(a) A director may resign at any time by giving written notice of his resignation to the Chairman of the Board or the Secretary, and such resignation, unless specifically contingent upon its acceptance, will be effective as of its date or of the date specified therein.

(b) In the event any Industry Director or Non-Industry Director fails to maintain the qualifications required for such category of director in Section 3.1 hereof, of which failure the Board shall be the sole judge, the term of office of such director shall terminate and such director shall thereupon cease to be a director, his office shall become vacant and, notwithstanding any provision to the contrary, the vacancy may be filled by the Board with a person who qualifies for the category in which the vacancy exists. Notwithstanding the foregoing, unless otherwise required by statute, the Certificate of Incorporation, regulations of the Securities and Exchange Commission ("SEC") or, if applicable, the regulations of any listing exchange on which the Corporation is listed, a director who fails to maintain the applicable qualifications may be allowed the later of (i) 45 days from the date when the Board determines the director is unqualified or (ii) until the next regular Board meeting following the date when the Board makes such determination, in which to requalify. Following the date when the Board determines the director is unqualified, the director shall be deemed not to hold office and the seat formerly held by the director shall be deemed to be vacant for all purposes. The Board shall be the sole judge of whether the director has requalified. If a director is determined to have requalified, the Board, in its sole discretion, may fill an existing vacancy in the Board or may increase the size of the Board, as necessary, to appoint such director to the Board; provided, however, that the Board shall be under no obligation to return such director to the Board.

(c) No Representative Director may be removed from office by a vote of the stockholders at any time except for cause, which shall include, but not be limited to (i) a breach of a Representative Director's duty of loyalty to the Corporation or its stockholders, (ii) acts or

omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) transactions from which a Representative Director derived an improper personal benefit, or (iv) a failure of a Representative Director to be free from a statutory disqualification (as defined in Section 3(a)(39) of the Act). Any Representative Director may be removed for cause by the holders of a majority of the shares of stock then entitled to be voted at an election of directors.

Section 3.5. Filling of Vacancies.

(a) Notwithstanding any provision herein to the contrary, any vacancy in the Board, however occurring, including a vacancy resulting from an increase in the number of the directors, may be filled by vote of a majority of the directors then in office, although less than a quorum, or by a sole remaining director, provided such new director qualifies for the category in which the vacancy exists. A director elected to fill a vacancy shall hold office until the next annual meeting of stockholders, subject to the election and qualification of his or her successor and to his or her earlier death, resignation, disqualification or removal.

(b) If the Board fills a vacancy resulting from a Representative Director position becoming vacant prior to the expiration of such Representative Director's term, or resulting from the creation of an additional Representative Director position required by an increase in the size of the Board, then the Board shall follow the procedures set forth in this Section 3.5(b). In such an event, the Representative Director Nominating Body shall either (i) recommend an individual to the Board to be elected to fill such vacancy or (ii) provide a list of recommended individuals to the Board from which the Board shall elect the individual to fill such vacancy. The Board shall elect, pursuant to this Section 3.5(b), only individuals recommended by the Representative Director Nominating Body; provided, however, the Board shall not be required to take any action or elect any individual if the Board believes that taking such action or electing such individual would be contrary to the Board's fiduciary duties. Any vacancy filled pursuant to this Section 3.5(b), shall be filled by the vote of a majority of the directors then in office, although less than a quorum. The Representative Director Nominating Body shall only recommend individuals to fill a vacancy in a Representative Director position who satisfy the compositional requirements designated by the Board from time to time pursuant to resolution adopted by the Board in accordance with Section 3.1, designating the number of Representative Directors that are Non-Industry Directors and Industry Directors (if any).

Section 3.6. Chairman of the Board of Directors.

The Board shall appoint one of the directors to serve as Chairman of the Board. Except as provided for in Section 3.7 hereof, the Chairman of the Board shall be the presiding officer at all meetings of the Board and stockholders and shall exercise such other powers and perform such other duties as are delegated to him or her by the Board.

Section 3.7. Lead Director.

The Board may appoint one of the Non-Industry Directors to serve as the Lead Director. The Lead Director shall perform such duties and possess such powers as the Board may from time to time prescribe. The Lead Director, if appointed, shall be authorized to preside at meetings of the directors that are not officers or employees of the Exchange.

Section 3.8. Acting Chairman and Vacancy in Chairman Position.

(a) In the absence or inability to act of the Chairman of the Board, the Board may designate an Acting Chairman of the Board. The Acting Chairman of the Board, in the absence or inability to act of the Chairman, shall be presiding officer at all meetings of the Board and shall exercise such other powers and perform such other duties as are delegated to the Acting Chairman by the Board.

(b) If a vacancy occurs in the office of Chairman, the Board may fill such vacancy by the affirmative vote of at least a majority of the directors then in office.

Section 3.9. Quorum.

At all meetings of the Board, two-thirds of the number of directors then in office shall constitute a quorum for the transaction of business, and the vote of a majority of the directors present at any meeting at which a quorum is present shall be the act of the Board, except as may be otherwise specifically provided by statute or the Certificate of Incorporation. If a quorum shall not be present at any meeting of the Board, a majority of the directors present thereat may adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum shall be present.

Section 3.10. Regular Meetings.

Regular meetings of the Board shall be held at such time and at such place as shall from time to time be determined by the Chairman of the Board with notice of such determination provided to the full Board.

Section 3.11. Special Meetings.

Special meetings of the Board may be called by the Chairman of the Board and shall be called by the Secretary upon the written request of any four directors. The Secretary shall give at least 24 hours notice of such meeting to each director, in a manner permitted by Section 7.1. Every such notice shall state the time and place of the meeting which shall be fixed by the person calling the meeting, but need not state the purpose thereof except as otherwise required by statute.

Section 3.12. Participation in Meeting.

Members of the Board or of any committee thereof may participate in a meeting of the Board or such committee by conference telephone or other communications equipment by means of which all persons participating in the meeting can hear each other, and such participation in a meeting shall constitute presence in person at such a meeting.

Section 3.13. Action by Written Consent.

Unless otherwise restricted by statute or the Certificate of Incorporation, any action required or permitted to be taken at any meeting of the Board or of any committee thereof may be taken without a meeting if all members of the Board or such committee, as the case may be, consent thereto in writing or by electronic transmission, and the writing or writings or electronic transmission or transmissions are filed with the minutes of proceedings of the Board or of such committee.

Section 3.14. Interested Directors.

No director shall be disqualified from participating in any meeting, action or proceeding of the Board by reason of being or having been a member of a committee which has made prior inquiry, examination or investigation of the subject under consideration. No director shall participate in the adjudication of any matter with respect to which the Board is acting as an adjudicative body under the Rules, and in which such director is personally interested, although interested directors may be counted in determining the presence of a quorum at the meeting of the Board or of a committee which authorizes actions with respect to such matter.

ARTICLE IV Committees

Section 4.1. Designation of Committees.

(a) Committees of the Board. The committees of the Board shall consist of an Executive Committee, a Regulatory Oversight Committee, a Nominating and Governance Committee and such other standing and special committees as may be approved by the Board. Except as may be otherwise provided in these Bylaws or as may be otherwise provided for from time to time by resolution of the Board, the Board may, at any time, with or without cause, remove any member of any such committees of the Board.

(b) Committees of the Exchange. The Exchange also shall have such committees as may be provided in these Bylaws or the Rules or as may be from time to time created by the Board. Except as may be otherwise provided in these Bylaws, the Rules or the resolution of the Board establishing any such other committee, the Chief Executive Officer or his or her designee, with the approval of the Board, shall appoint the members of such Exchange committees (other than the committees of the Board) and may designate, with the approval of the Board, a Chairman and a Vice-Chairman thereof. Except as may be otherwise provided in these Bylaws or the Rules, the Chief Executive Officer or his or her designee, with the approval of the Board, may, at any time, with or without cause, remove any member of any such Exchange committees.

Section 4.2. The Executive Committee.

The Executive Committee will include the Chairman of the Board, the Chief Executive Officer (if a director), the Lead Director, if any, at least one Representative Director and such other number of directors that the Board deems appropriate, provided that in no event shall the number of Non-Industry Directors constitute less than the number of Industry Directors serving on the Executive Committee (excluding the Chief Executive Officer from the calculation of Industry Directors for such purpose). Members of the Executive Committee (other than those specified in the immediately preceding sentence) shall be recommended by the Nominating and Governance Committee for approval by the Board. Members of the Executive Committee shall not be subject to removal except by the Board. The Chairman of the Board shall be the Chairman of the Executive Committee. Each member of this Committee shall be a voting member. The members of the Executive Committee shall serve for a term of one year expiring at the first regular meeting of directors following the annual meeting of stockholders each year or until their successors are appointed. The Executive Committee shall have and may exercise all the powers and authority of the Board in the management of the business and affairs of the Corporation, except it shall not have the power and authority of the Board to (i) approve or adopt or recommend to the stockholders any action or matter (other than the election or removal of

directors) expressly required by Delaware law to be submitted to stockholders for approval, including without limitation, amending the Certificate of Incorporation, adopting an agreement of merger or consolidation, approving a sale, lease or exchange of all or substantially all of the Corporation's property and assets, or approval of a dissolution of the Corporation or revocation of a dissolution, or (ii) adopt, alter, amend or repeal any bylaw of the Corporation.

Section 4.3. The Nominating and Governance Committee.

The Nominating and Governance Committee shall consist of at least five directors and shall at all times have a majority of directors that are Non-Industry Directors. All members of the committee shall be recommended by the Nominating and Governance Committee for approval by the Board. The exact number of Nominating and Governance Committee members shall be determined from time to time by the Board. Members of the Nominating and Governance Committee shall not be subject to removal except by the Board. The Chairman of the Nominating and Governance Committee shall be recommended by the Nominating and Governance Committee for approval by the Board. Subject to Section 3.2 and Section 3.5 of these Bylaws, the Nominating and Governance Committee shall have the authority to nominate individuals for election as directors of the Corporation. The Nominating and Governance Committee shall have such other duties and may exercise such other authority as may be prescribed by resolution of the Board and the Nominating and Governance Committee Charter as adopted by resolution of the Board. If the Nominating and Governance Committee has two or more Industry Directors, there shall be an Industry-Director Subcommittee consisting of all of the Industry Directors then serving on the Nominating and Governance Committee, which shall act as the Representative Director Nominating Body if and to the extent required by these Bylaws.

Section 4.4. The Regulatory Oversight Committee.

The Regulatory Oversight Committee shall consist of at least three directors, all of whom shall be Non-Industry Directors and all of whom shall be recommended by the Non-Industry Directors on the Nominating and Governance Committee for approval by the Board. The exact number of Regulatory Oversight Committee members shall be determined from time to time by the Board. Members of the Regulatory Oversight Committee shall not be subject to removal except by the Board. The Chairman of the Regulatory Oversight Committee shall be recommended by the Non-Industry Directors of the Nominating and Governance Committee for approval by the Board. The Regulatory Oversight Committee shall have such duties and may exercise such authority as may be prescribed by resolution of the Board, these Bylaws or the Rules of the Exchange.

Section 4.5. Other.

All other committees shall have such duties and may exercise such authority as may be prescribed for them by the Certificate of Incorporation, these Bylaws or the Rules or by resolution of the Board.

Section 4.6. Conduct of Proceedings.

Unless otherwise provided in the Certificate of Incorporation, these Bylaws, the Rules, the charter of the committee or by the Board of Directors by resolution, each committee may

determine the manner in which committee proceedings shall be conducted. In the absence of any such established procedures, each committee shall conduct its business in the same manner as the Board of Directors conducts its business pursuant to Article 3 of these Bylaws. Committees shall keep minutes of their meetings and periodically report their proceedings to the Board and appropriate committees of the Board to the extent requested by the Board or Board committee.

ARTICLE V Officers

Section 5.1. Designation; Number; Election.

(a) The officers of the Corporation shall be a Chief Executive Officer, a President, a Chief Financial Officer, one or more Vice-Presidents (the number thereof to be determined by the Board), a Secretary, a Treasurer, and such other officers as the Board may determine, including an Assistant Secretary and Assistant Treasurer. The Chief Executive Officer shall be appointed by an affirmative vote of the majority of the Board, and may, but need not be the Chairman of the Board. Such affirmative vote may also prescribe his duties not inconsistent with these Bylaws and may prescribe a tenure of office. The remaining officers of the Corporation shall be appointed by the Board, each to serve until a successor has been duly chosen and qualified or until the officer's earlier death, resignation or removal.

(b) Two or more offices may be held by the same person, except the offices of Chief Executive Officer and President. In addition, the Chief Executive Officer and the President may not also be either the Secretary or Assistant Secretary.

Section 5.2. Chief Executive Officer.

The Chief Executive Officer shall, subject to the direction of the Board, have general charge and supervision of the business of the Corporation. The Chief Executive Officer shall be the official representative of the Corporation in all public matters. The Chief Executive Officer shall perform such other duties and possess such other powers as the Board may from time to time prescribe and that are incident to such office. The Chief Executive Officer shall not engage in any other business during his incumbency except with approval of the Board, and by his acceptance of the office of Chief Executive Officer he shall be deemed to have agreed to uphold these Bylaws.

Section 5.3. President.

The President shall be the chief operating officer of the Corporation and shall perform such duties and possess such powers as the Board or the Chief Executive Officer may from time to time prescribe. In the event of the absence, inability or refusal to act of the Chief Executive Officer, the President shall perform the officer duties of the Chief Executive Officer and, when so performing, shall have all the powers of and be subject to all the restrictions upon the office of Chief Executive Officer.

Section 5.4. Chief Financial Officer.

The Chief Financial Officer shall perform such duties and possess such powers as the Board or the Chief Executive Officer may from time to time prescribe. The Chief Financial Officer shall have the custody of the Corporation's funds and securities; shall keep full and accurate all books and accounts of the Corporation as shall be necessary or desirable in accordance with

applicable law or generally accepted accounting principles; shall deposit all monies and other valuable effects in the name and to the credit of the Corporation as may be ordered by the Chief Executive Officer or the Board; shall cause the funds of the Corporation to be disbursed when such disbursements have been duly authorized, taking proper vouchers for such disbursements; and shall render to the Board, at its regular meeting or when the Board so requires, an account of the Corporation.

Section 5.5. Vice Presidents.

Vice Presidents shall perform the duties prescribed by the Board, Chief Executive Officer or President.

Section 5.6. Secretary.

The Secretary shall keep official records of meetings of stockholders and of Exchange Members at which action is taken and of all meetings of the Board; the Secretary shall, in person or by representative, perform like services for the standing and special committees when required; the Secretary shall give notice of meetings of stockholders and of Exchange Members and of special meetings of the Board in accordance with the provisions of the Rules or these Bylaws or as required by statute; the Secretary shall post all notices which may be required to be posted upon the Corporation website; the Secretary shall be custodian of the books, records, and corporate seal of the Corporation and attest, upon behalf of the Corporation, all contracts and other documents requiring authentication; the Secretary shall perform such other duties as may be prescribed by the Board, Chairman of the Board, Chief Executive Officer or President.

Section 5.7. Treasurer.

The Treasurer shall perform such duties and possess such powers as the Board, the Chief Executive Officer or the Chief Financial Officer may from time to time prescribe.

Section 5.8. Removals.

Any officer appointed by the Board may be removed at any time by the Board, the Chief Executive Officer or the President; provided that the Chief Executive Officer can only be removed by the Board. Any such removal shall be without prejudice to the contract rights, if any, of the person so removed. Any vacancies occurring in any office of the Corporation at any time may be filled by the Board or an officer authorized by the Board to appoint a person to hold such office.

Section 5.9. Resignations.

Any officer may resign by delivering such officer's written resignation to the Corporation at its principal office or to the Chief Executive Officer or Secretary. Such resignation shall be effective upon receipt unless it is specified to be effective at some other time or upon the happening of some other event.

Section 5.10. Vacancies.

The Board may fill any vacancy occurring in any office for any reason and may, in its discretion, leave unfilled for such period as it may determine any offices other than those of Chief Executive Officer, President, Secretary and Treasurer. Any vacancies occurring in any

office of the Corporation at any time also may be filled by an officer authorized by the Board to appoint a person to hold such office. Each such successor shall hold office until such officer's successor is elected and qualified, or until such officer's earlier death, resignation or removal.

Section 5.11. Salaries.

Officers of the Corporation shall be entitled to such salaries, compensation or reimbursement as shall be fixed or allowed from time to time by the Board unless otherwise delegated to a Committee of the Board or to members of senior management. No officer shall be prevented from receiving such salary by reason of the fact that the officer is also a director of the Corporation.

ARTICLE VI Advisory Board

Section 6.1. Advisory Board.

The Board may establish an Advisory Board which shall advise the Board and management regarding matters of interest to Exchange Members. If an Advisory Board is established it would consist of such number of members as set by the Board from time to time, including at least two members who are Exchange Members or persons associated with Exchange Members. The Chief Executive Officer, or his or her designee, shall be the Chairman of the Advisory Board. The members of the Advisory Board shall be recommended by the Nominating and Governance Committee for approval by the Board. There shall be an Exchange Member Subcommittee of the Advisory Board consisting of all members of the Advisory Board who are Exchange Members or persons associated with Exchange Members, which shall act as the Representative Director Nominating Body if and to the extent required by these Bylaws.

ARTICLE VII Notices

Section 7.1. Notices.

Except as provided in Section 7.2 and to the extent permitted by law, any notice required to be given by the Bylaws or the Rules or otherwise shall be deemed to have been given:

- (a) in person upon delivery of the notice in person to the Person to whom such notice is addressed;
- (b) by mail upon deposit of the notice in the United States mail, enclosed in a postage prepaid envelope;
- (c) by messenger or overnight courier service upon provision of the notice to the messenger or courier service, provided that the delivery method does not require payment of the messenger or courier service fee to deliver the notice by the Person to whom the notice is addressed;
- (d) by facsimile machine upon acknowledgment by the facsimile machine used to transmit the notice of the successful transmission of the notice;
- (e) by electronic mail upon electronic transmission of the notice; and
- (f) by telephone when received.

Any such notice must be addressed to its intended recipient at the intended recipient's address (including the intended recipient's business or residence address, facsimile number, electronic address, or telephone number, as applicable) as it appears on the books and records of the Corporation, or if no address appears on such books and records, then at such address as shall be otherwise known to the Secretary, or if no such address appears on such books and records, then in care of the registered agent of the Corporation in the State of Delaware. In the event that a notice is not provided in conformity with the provisions of this Section 7.1, the notice will be deemed to have been given to its intended recipient upon any receipt of the notice by its intended recipient.

Section 7.2. Electronic Notice to Stockholders.

Whenever any notice whatsoever is required to be given in writing to any stockholder by law, by the Certificate of Incorporation or by these Bylaws, such notice may be given by a form of electronic transmission if the stockholder to whom such notice is given has previously consented to the receipt of notice by electronic transmission.

Section 7.3. Waiver of Notice.

Whenever notice is required to be given under the provisions of any statute, the Certificate of Incorporation, these Bylaws, the Rules or otherwise, a written waiver thereof, signed by the Person entitled to notice, or his proxy, whether before or after the time stated therein shall be deemed equivalent to notice. Except as may be otherwise specifically provided by statute, any waiver by mail, messenger, overnight courier, facsimile machine, or electronic mail, bearing the name of the Person entitled to notice shall be deemed a written waiver duly signed. Attendance of a Person at a meeting, including attendance by proxy, shall constitute a waiver of notice of such meeting except when the Person attends a meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business the meeting is not lawfully called or convened. Except as required by statute or the Certificate of Incorporation, neither the business to be transacted at, nor the purpose of, any regular or special meeting of the stockholders, directors or any committee need be specified in any written waiver of notice.

ARTICLE VIII General Provisions

Section 8.1. Fiscal Year.

Except as otherwise determined from time to time by the Board, the fiscal year of the Corporation ends on the close of business on December 31 of each year.

Section 8.2. Checks, Drafts and Other Instruments.

All checks, drafts or other orders for the payment of money, notes or other evidences of indebtedness issued in the name of the Corporation shall be signed by such officer or officers, or by such agent or agents of the Corporation and in such manner as the Board may from time to time determine.

Section 8.3. Corporate Seal.

The corporate seal, if any, shall be in such form as shall be approved by the Board or an officer of the Corporation.

Section 8.4. Voting Securities.

Except as the Board may otherwise designate, the Chairman of the Board, Chief Executive Officer, Chief Financial Officer or Treasurer may waive notice of, and act as, or appoint any person or persons to act as, proxy or attorney-in-fact for the Corporation (with or without power of substitution) at, any meeting of stockholders or shareholders of any other corporation or organization, the securities of which may be held by this Corporation.

Section 8.5. Evidence of Authority.

A certificate by the Secretary, or Assistant Secretary, if any, as to any action taken by the stockholders, directors, a committee or any officer or representative of the Corporation shall, as to all Persons who rely on the certificate in good faith, be conclusive evidence of such action.

Section 8.6. Certificate of Incorporation.

All references in these Bylaws to the Certificate of Incorporation shall be deemed to refer to the Certificate of Incorporation of the Corporation, as amended, altered or restated and in effect from time to time.

Section 8.7. Transactions with Interested Parties.

No contract or transaction between the Corporation and one or more of the directors or officers, or between the Corporation and any other corporation, limited liability company, partnership, association or other organization in which one or more of the directors or officers are directors, managers or officers, or have a financial interest, shall be void or voidable solely for this reason, or solely because the director or officer is present at or participates in the meeting of the Board or a committee of the Board which authorizes the contract or transaction or solely because his, her or their votes are counted for such purpose, if:

(a) The material facts as to his, her or their relationship or interest and as to the contract or transaction are disclosed or are known to the Board or the committee, and the Board or committee in good faith authorizes the contract or transaction by the affirmative votes of a majority of the disinterested directors, even though the disinterested directors be less than a quorum;

(b) The material facts as to his, her or their relationship or interest and as to the contract or transaction are disclosed or are known to the stockholders entitled to vote thereon, and the contract or transaction is specifically approved in good faith by vote of the stockholders; or

(c) The contract or transaction is fair as to the Corporation as of the time it is authorized, approved or ratified by the Board, a committee of the Board or the stockholders.

Both (i) directors who are directors of both the Corporation and a party with whom the Corporation may be engaged in a transaction and (ii) interested directors may be counted in determining the presence of a quorum at a meeting of the Board or of a committee at which the contract or transaction is authorized.

Section 8.8. Severability.

Any determination that any provision of these Bylaws is for any reason inapplicable, illegal or ineffective shall not affect or invalidate any other provision of these Bylaws.

Section 8.9. Pronouns.

All pronouns used in these Bylaws shall be deemed to refer to the masculine, feminine or neuter, singular or plural, as the identity of the person or persons may require.

Section 8.10. Contracts.

In addition to the powers otherwise granted to officers pursuant to Article V hereof, the Board may authorize any officer or officers, or any agent or agents, of the Corporation to enter into any contract or to execute and deliver any instrument in the name of and on behalf of the Corporation, and such authority may be general or confined to specific instances.

Section 8.11. Loans.

The Corporation may, to the extent permitted by applicable law, lend money to, or guarantee any obligation of, or otherwise assist any officer or other employee of the Corporation or of its subsidiaries, including any officer or employee who is a director of the Corporation or its subsidiaries, whenever, in the judgment of the directors, such loan, guaranty or assistance may reasonably be expected to benefit the Corporation. The loan, guaranty or other assistance may include, without limitation, a pledge of shares of stock of the Corporation. Nothing in this Section 8.11 shall be deemed to deny, limit or restrict the powers of guaranty or warranty of the Corporation at common law or under any statute.

Section 8.12. Books and Records.

Subject to applicable law, the Board shall have power from time to time to determine to what extent and at what times and places and under what conditions and regulations the accounts and books of the Corporation, or any of them, shall be open to the inspection of the stockholders; and no stockholder shall have any right to inspect any account or book or document of the Corporation, except as conferred by the laws of the State of Delaware. The Corporation shall keep its books and records within the United States. Any books or records of the Corporation may be kept on, or be in the form of, magnetic tape, computer disk, or any other information storage device, provided that the records so kept can be converted into clearly legible form within a reasonable time.

Section 8.13. Section Headings.

Section headings in these Bylaws are for convenience of reference only and shall not be given any substantive effect in limiting or otherwise construing any provision herein.

Section 8.14. Inconsistent Provisions.

In the event that any provision of these Bylaws is or becomes inconsistent with any provision of the Certificate of Incorporation, the General Corporation Law of the State of Delaware ("DGCL") or any other applicable law, the provision of these Bylaws shall not be given any effect to the extent of such inconsistency but shall otherwise be given full force and effect.

ARTICLE IX Amendments

Section 9.1. By the Board.

These Bylaws may be altered, amended or repealed, or new Bylaws may be adopted, by the Board.

Section 9.2. By the Stockholders.

These Bylaws may be altered, amended or repealed or new Bylaws may be adopted by the affirmative vote of the majority of the stockholders present at any annual meeting of the stockholders at which a quorum is present.

Section 9.3. SEC Approval.

Before any amendment to, alteration or repeal of any provision of the Bylaws of the Corporation under this Article IX shall be effective, those changes shall be submitted to the Board and if the same must be filed with or filed with and approved by the SEC, then the proposed changes to the Bylaws of the Corporation shall not become effective until filed with or filed with and approved by the SEC, as the case may be.

ARTICLE X Rulemaking

Section 10.1. Rulemaking.

The Board may, by the affirmative vote of a majority of a quorum of the Board, alter, adopt, amend or repeal as it may deem necessary or proper any of the Corporation's Rules, which shall not become effective until filed with or filed with and approved by the SEC, as the case may be.

D Cboe BYX Exchange, Inc.

Delaware

The First State

Page 1

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE RESTATED CERTIFICATE OF "BATS BYX EXCHANGE, INC.", CHANGING ITS NAME FROM "BATS BYX EXCHANGE, INC." TO "CBOE BYX EXCHANGE, INC.", FILED IN THIS OFFICE ON THE SIXTEENTH DAY OF OCTOBER, A.D. 2017, AT 9:55 O`CLOCK P.M.

A FILED COPY OF THIS CERTIFICATE HAS BEEN FORWARDED TO THE NEW CASTLE COUNTY RECORDER OF DEEDS.



4715533 8100
SR# 20176643022

You may verify this certificate online at corp.delaware.gov/authver.shtml

A handwritten signature in black ink, appearing to read "JBullock", is written over a horizontal line. Below the line, the text "Jeffrey W. Bullock, Secretary of State" is printed.

Jeffrey W. Bullock, Secretary of State

Authentication: 203409177
Date: 10-17-17

**SECOND AMENDED AND RESTATED
CERTIFICATE OF INCORPORATION
of
BATS BYX EXCHANGE, INC.**

The corporation filed its original Certificate of Incorporation with the Secretary of State of the State of Delaware on July 30, 2009 under the name BATS Y-Exchange, Inc. This Second Amended and Restated Certificate of Incorporation of the corporation, which only restates and integrates and does not further amend (except as permitted under Section 242(a)(1) of the General Corporation Law of the State of Delaware in order to change the name of the corporation) the provisions of the corporation's Amended and Restated Certificate of Incorporation, was duly adopted by the Board of Directors of the corporation in accordance with the provisions of Sections 242(b)(1) and 245 of the General Corporation Law of the State of Delaware. The Amended and Restated Certificate of Incorporation of the corporation is hereby amended, integrated and restated to read in its entirety as follows:

FIRST: The name of the corporation (the "Corporation") is Cboe BYX Exchange, Inc.

SECOND: The address of the registered office of the Corporation in the State of Delaware is Corporation Trust Center, 1209 Orange Street, in the City of Wilmington, County of New Castle, Delaware 19801-1297. The name of the Corporation's registered agent at such address shall be The Corporation Trust Company.

THIRD: The nature of the business or purposes to be conducted or promoted by the Corporation is:

(a) To conduct and carry on the function of an "exchange" within the meaning of that term in the Securities Exchange Act of 1934, as amended (the "Act");

(b) To provide a securities market place with high standards of honor and integrity among its Exchange Members and other persons holding rights to access the Corporation's facilities and to promote and maintain just and equitable principles of trade and business. The term "Exchange Member" shall have the meaning given to that term in Section 1.1 of the Corporation's Bylaws, as the same may be amended from time to time (the "Corporation's Bylaws"); and

(c) To engage in any other lawful act or activity for which corporations may be organized under the General Corporation Law of the State of Delaware ("GCL").

FOURTH: The total number of shares of stock which the Corporation shall have authority to issue is one thousand (1,000) shares of common stock having a par value of \$0.01 per share (the "Common Stock"). Bats Global Markets Holdings, Inc. will be the sole owner of the Common Stock. Any sale, transfer or assignment by Bats Global Markets Holdings, Inc. of any shares of Common Stock will be subject to prior approval by the Securities and Exchange Commission (the "Commission") pursuant to the rule filing procedure under Section 19 of the Act.

FIFTH: (a) The governing body of the Corporation shall be its Board of Directors. The business and affairs of the Corporation shall be managed by or under the direction of the Board of Directors.

State of Delaware

Secretary of State

Division of Corporations

Delivered 09:55 PM 10/16/2017

FILED 09:55 PM 10/16/2017

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(b) The Board of Directors of the Corporation shall consist of not less than 5 directors, the exact number to be fixed in accordance with the Corporation's Bylaws.

(c) Only persons who are nominated by the Nominating and Governance Committee shall be eligible for election as directors. The Nominating and Governance Committee shall be bound to accept and nominate (a) the individual(s) recommended by the Representative Director Nominating Body (as defined in the Corporation's Bylaws) for nomination as Representative Director (as defined in the Corporation's Bylaws), provided that the individuals so nominated by the Representative Director Nominating Body are not opposed by a petition candidate or (b) the individual(s) who receive the most votes pursuant to a petition election as set forth in Section 3.2 of the Corporation's Bylaws; provided, however, that any individual(s) recommended by the Representative Director Nominating Body and any individual(s) who are petition candidates pursuant to clause (b) of the preceding sentence shall satisfy the compositional requirements determined by the Board of Directors from time to time pursuant to a resolution adopted by the Board in accordance with Section 3.1 of the Corporation's Bylaws, designating the number of Representative Directors that are Non-Industry Directors and Industry Directors (if any), as such terms are defined in the Corporation's Bylaws; and provided further, that the Board of Directors and/or Nominating and Governance Committee, as applicable, shall make such determinations as to whether a director candidate satisfies applicable qualifications for election as a director pursuant to and in accordance with Section 3.1 of the Corporation's Bylaws.

(d) In discharging his or her responsibilities as a member of the Board of Directors, and to the fullest extent permitted by law, each director shall take into consideration the effect that his or her actions would have on the ability of the Corporation to carry out the Corporation's responsibilities under the Act and on the ability of the Corporation: to engage in conduct that fosters and does not interfere with the Corporation's ability to prevent fraudulent and manipulative acts and practices; to promote just and equitable principles of trade; to foster cooperation and coordination with persons engaged in regulating, clearing, settling, processing information with respect to, and facilitating transactions in securities; to remove impediments to and perfect the mechanisms of a free and open market and a national market system; and, in general, to protect investors and the public interest. In discharging his or her responsibilities as a member of the Board of Directors or as an officer or employee of the Corporation, each such director, officer or employee shall comply with the federal securities laws and the rules and regulations thereunder and shall cooperate with the Commission, and the Corporation pursuant to its regulatory authority.

SIXTH: (a) The Corporation shall, to the fullest extent permitted by applicable law as it presently exists or may hereafter be amended, indemnify and hold harmless any person (a "Covered Person") who was or is made or is threatened to be made a party or is otherwise involved in any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (a "proceeding"), by reason of the fact that he or she is or was a director, officer or member of a committee of the Corporation, or, while a director or officer of the Corporation, is or was serving at the request of the Corporation as a director or officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise or non-profit entity, including service with respect to employee benefit plans, against all liability and loss suffered and expenses (including attorneys' fees), judgment, fines and amounts paid in settlement actually and reasonably incurred by such Covered Person in connection with a proceeding. Notwithstanding the preceding sentence, except as otherwise

provided in Section (c) of this Article Sixth, the Corporation shall be required to indemnify a Covered Person in connection with a proceeding (or part thereof) commenced by such Covered Person only if the commencement of such proceeding (or part thereof) by the Covered Person was authorized in the specific case by the Board of Directors of the Corporation.

(b) Expenses (including attorneys' fees) incurred by a Covered Person in defending a proceeding, including appeals, shall, to the extent not prohibited by law, be paid by the Corporation in advance of the final disposition of such proceeding; provided, however, that the Corporation shall not be required to advance any expenses to a person against whom the Corporation directly brings an action, suit or proceeding alleging that such person (1) committed an act or omission not in good faith or (2) committed an act of intentional misconduct or a knowing violation of law. Additionally, an advancement of expenses incurred by a Covered Person shall be made only upon delivery to the Corporation of an undertaking, by or on behalf of such Covered Person, to repay all amounts so advanced if it shall ultimately be determined by final judicial decision from which there is no further right to appeal or otherwise in accordance with Delaware law that such Covered Person is not entitled to be indemnified for such expenses under this Article Sixth.

(c) If a claim for indemnification (following the final disposition of such action, suit or proceeding) or advancement of expenses under this Article Sixth is not paid in full within thirty days after a written claim therefor by the Covered Person has been received by the Corporation, the Covered Person may file suit to recover the unpaid amount of such claim and, if successful in whole or in part, shall be entitled to be paid the expense of prosecuting such claim to the fullest extent permitted by law. In any action the Corporation shall have the burden of proving that the Covered Person is not entitled to the requested indemnification or advancement of expenses under applicable law.

(d) The provisions of this Article Sixth shall be deemed to be a contract between the Corporation and each Covered Person who serves in any such capacity at any time while this Article Sixth is in effect, and any repeal or modification of any applicable law or of this Article Sixth shall not affect any rights or obligations then existing with respect to any state of facts then or theretofore existing or any action, suit or proceeding theretofore or thereafter brought or threatened based in whole or in part upon any such state of facts.

(e) Persons not expressly covered by the foregoing provisions of this Article Sixth, such as those (x) who are or were employees or agents of the Corporation, or are or were serving at the request of the Corporation as employees or agents of another corporation, partnership, joint venture, trust or other enterprise, or (y) who are or were directors, officers, employees or agents of a constituent corporation absorbed in a consolidation or merger in which the Corporation was the resulting or surviving corporation, or who are or were serving at the request of such constituent corporation as directors, officers, employees or agents of another corporation, partnership, joint venture, trust or other enterprise, may be indemnified or advanced expenses to the extent authorized at any time or from time to time by the Board of Directors.

(f) The rights conferred on any Covered Person by this Article Sixth shall not be deemed exclusive of any other rights to which such Covered Person may be entitled by law or otherwise, and shall continue as to a person who has ceased to be a director, officer, employee or agent and shall inure to the benefit of the heirs, executors and administrators of such person.

(g) The Corporation's obligation, if any, to indemnify or to advance expenses to any Covered Person who was or is serving at its request as a director, officer, employee or agent of another corporation, partnership, joint venture, trust, enterprise or nonprofit entity shall be reduced by any amount such Covered Person may collect as indemnification or advancement of expenses from such other corporation, partnership, joint venture, trust, enterprise or non-profit entity.

(h) Any repeal or modification of the foregoing provisions of this Article Sixth shall not adversely affect any right or protection hereunder of any Covered Person in respect of any act or omission occurring prior to the time of such repeal or modification.

(i) The Corporation may purchase and maintain insurance, at its expense, to protect itself and any director, manager, officer, trustee, employee or agent of the Corporation or another corporation, or of a partnership, limited liability company, joint venture, trust or other enterprise against any expense, liability or loss (as such terms are used in this Article Sixth), whether or not the Corporation would have the power to indemnify such person against such expense, liability or loss under the GCL.

SEVENTH: The Corporation reserves the right to amend this Certificate of Incorporation, and to change or repeal any provision of this Certificate of Incorporation, in the manner prescribed at the time by statute, and all rights conferred upon stockholders by this Certificate of Incorporation are granted subject to this reservation. Before any amendment to, or repeal of, any provision of this Certificate of Incorporation shall be effective, those changes shall be submitted to the Board of Directors of the Corporation and if such amendment or repeal must be filed with or filed with and approved by the Commission, then the proposed changes to this Certificate of Incorporation shall not become effective until filed with or filed with and approved by the Commission, as the case may be.

EIGHTH: A director of the Corporation shall not be liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director, except to the extent such exemption from liability or limitation thereof is not permitted under the GCL as the same exists or may hereafter be amended. Any amendment, modification or repeal of the foregoing sentence shall not adversely affect any right or protection of a director of the Corporation hereunder in respect of any act or omission occurring prior to the time of such amendment, modification or repeal.

NINTH: Unless and except to the extent that the Corporation's Bylaws shall so require, the election of directors of the Corporation need not be by written ballot.

TENTH: In furtherance and not in limitation of the powers conferred by the laws of the State of Delaware, the Board of Directors of the Corporation is expressly authorized to make, alter and repeal the Corporation's Bylaws.

ELEVENTH: To the fullest extent permitted by law, all confidential information pertaining to the self-regulatory function of the Corporation (including but not limited to disciplinary matters, trading data, trading practices and audit information) contained in the books and records of the Corporation shall: (i) not be made available to any persons other than to those officers, directors, employees and agents of the Corporation that have a reasonable need to know the contents thereof; (ii) be retained in confidence by the Corporation and the officers, directors, employees and agents of the Corporation; and (iii) not be used for any commercial purposes.

Nothing in this Article Eleventh shall be interpreted as to limit or impede the rights of the Commission to access and examine such confidential information pursuant to the federal securities laws and the rules and regulations thereunder, or to limit or impede the ability of any officers, directors, employees or agents of the Corporation to disclose such confidential information to the Commission.

IN WITNESS WHEREOF, BATS BYX Exchange, Inc. has caused this certificate to be signed as of this 16th day of October, 2017.

BATS BYX EXCHANGE, INC.

By:

Name: Edward T. Tilly

Its: Chief Executive Officer

SEVENTH AMENDED AND RESTATED

BYLAWS OF

CBOE BYX EXCHANGE, INC.

ARTICLE I Definitions

Section 1.1. Definitions.

When used in these Bylaws, except as expressly otherwise provided or unless the context otherwise requires:

- (a) The term “Act” means the Securities Exchange Act of 1934, as amended.
- (b) The term “affiliate” of a Person or “affiliated with” another Person means a Person who, directly or indirectly, controls, is controlled by, or is under common control with, such other person.
- (c) The term “Board” means the Board of Directors of the Corporation.
- (d) The term “Corporation” means Cboe BYX Exchange, Inc.
- (e) The term “Exchange” means the Corporation, its exchange market and any facilities thereof.
- (f) The term “Exchange Member” shall have the same meaning as the term “Member” in the Rules of the Exchange.
- (g) The term “Person” shall mean an individual, partnership (general or limited), joint stock company, corporation, limited liability company, trust or unincorporated organization, or any governmental entity or agency or political subdivision thereof.
- (h) The term “Rules” means the rules of the Exchange as adopted or amended from time to time.
- (i) The term “associated with an entity” means any partner, officer or director of such entity (or any person occupying a similar status or performing similar functions), any person directly or indirectly controlling, controlled by, or under common control with such entity, or any employee of such entity.
- (j) The term “Representative Director Nominating Body” shall mean the Industry-Director Subcommittee of the Nominating and Governance Committee if there are at least two Industry Directors on the Nominating and Governance Committee. If the Nominating and Governance Committee has less than two Industry Directors, then the “Representative Director Nominating Body” shall mean the Exchange Member Subcommittee of the Advisory Board.

ARTICLE II Stockholders

Section 2.1. Place of Meetings.

All meetings of stockholders shall be held at such place within or without the State of Delaware as may be designated from time to time by the Board or the Chairman of the Board (or,

if there is no Chairman of the Board, the Chief Executive Officer) or, if not so designated, at the principal place of business of the Corporation in Chicago, Illinois.

Section 2.2. Annual Meetings.

If required by applicable law, an annual meeting of stockholders shall be held on the third Tuesday in May of each year or such other date as may be fixed by the Board, at such time as may be designated by the Secretary prior to the giving of notice of the meeting, for the purpose of electing directors to fill expiring terms and any vacancies in unexpired terms and for the transaction of business as may properly come before the meeting. In no event shall the annual meeting date each year be prior to the completion of the process for the nomination of the Representative Directors for that annual meeting as set forth in Sections 3.1 and 3.2.

Section 2.3. Special Meetings.

Special meetings of stockholders, for any purpose or purposes, unless otherwise prescribed by statute or by the Certificate of Incorporation of the Corporation, may be called by the Chairman of the Board or by a majority of the Board.

Section 2.4. Notice of Stockholders' Meetings.

Unless otherwise prescribed by statute or the Certificate of Incorporation, notice of each meeting of stockholders, stating the date, time and place thereof, and, in the case of special meetings, the purpose or purposes for which such meeting is called, shall be given to each stockholder of record entitled to vote thereat not more than 60 days and at least 10 days before the date of the meeting.

Section 2.5 Quorum and Adjournments.

Except as otherwise provided by statute or the Certificate of Incorporation, a majority of the outstanding stock of the Corporation entitled to vote at the meeting, when present in person or represented by proxy, shall constitute a quorum at all meetings of stockholders for the transaction of business. If such quorum shall not be present or represented by proxy at any meeting of stockholders, holders of a majority of the stock present in person or represented by proxy at the meeting shall have power to adjourn the meeting from time to time, without notice other than announcement at the meeting unless otherwise required by statute, until a quorum shall be present or represented. At any such adjourned meeting at which a quorum is present, any business may be transacted which might have been transacted at the meeting as originally notified. Nothing in these Bylaws shall affect the right to adjourn a meeting from time to time where a quorum is present.

Section 2.6. Voting by Stockholders.

With respect to any question brought before a meeting, when a quorum is present, a majority of the votes properly cast on any question shall decide the question, unless the question is one upon which by express provision of statute or the Certificate of Incorporation, a different vote is required, in which case such express provision shall govern and control. Notwithstanding the preceding sentence, a plurality of votes properly cast shall elect the directors.

Section 2.7. Determination of Stockholders of Record.

(a) The Board may fix a record date to determine the stockholders entitled to notice of and to vote at a meeting of stockholders or any adjournment thereof ("Record Date"). The Record Date shall not be more than 60 days nor less than 10 days before the date of the meeting.

(b) If no Record Date is fixed by the Board for a meeting of stockholders, the Record Date for the meeting shall be at the close of business on the day preceding the date on which notice of the meeting is given by the Corporation.

(c) A Record Date shall apply to any adjournment of a meeting of stockholders; provided, however, that the Board may fix a new Record Date for the adjourned meeting.

Section 2.8. Action by Written Consent of Stockholders.

Unless otherwise restricted by the Certificate of Incorporation, any corporate action upon which a vote of stockholders is required or permitted may be taken without a meeting, without prior notice and without a vote, if a consent in writing, setting forth the action so taken, shall be signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote on that matter were present and voted and shall be delivered to the Corporation in the manner required by law at its registered office within the State of Delaware or at its principal place of business or to an officer or agent of the Corporation having custody of the book in which proceedings of meetings of stockholders of the Corporation are recorded. Every written consent shall bear the date of signature of each stockholder who signs the consent and no written consent shall be effective to take the corporate action referred to in the consent unless, within 60 days of the earliest dated consent delivered to the Corporation, written consents signed by a sufficient number of holders to take action are delivered to the Corporation as required by these Bylaws or by applicable law. Prompt notice of the taking of the corporate action without a meeting by less than unanimous written consent shall be given to those stockholders who have not so consented in writing.

ARTICLE III Board of Directors

Section 3.1. Number, Election and Term of Office of Directors.

The Board shall consist of not less than 5 directors. The Board shall determine from time to time pursuant to resolution adopted by the Board the total number of directors, the number of Non-Industry Directors and Industry Directors (if any), and the number of Representative Directors that are Non-Industry Directors and Industry Directors (if any). In no event shall the number of Non-Industry Directors constitute less than the number of Industry Directors (excluding the Chief Executive Officer from the calculation of Industry Directors for such purpose). In addition, at all times at least 20% of directors serving on the Board shall be Representative Directors nominated (or otherwise selected through the petition process) as provided for in Section 3.2 by the Representative Director Nominating Body.

A "Non-Industry Director" is a person who is not an Industry Director.

An "Industry Director" is any director who (i) is an Exchange Member or otherwise subject to regulation by the Exchange; (ii) is a broker-dealer or an officer, director or employee of a

broker-dealer or has been in any such capacity within the prior three years; (iii) is, or was within the prior three years, associated with an entity that is affiliated with a broker-dealer whose revenues account for a material portion of the consolidated revenues of the entities with which the broker-dealer is affiliated; (iv) has a material ownership interest in a broker-dealer and has investments in broker-dealers that account for a material portion of the director's net worth; (v) has a consulting or employment relationship with or has provided professional services to the Exchange or any of its affiliates or has had such a relationship or has provided such services within the prior three years; or (vi) provides, or has provided within the prior three years, professional or consulting services to a broker-dealer, or to an entity with a 50% or greater ownership interest in a broker-dealer whose revenues account for a material portion of the consolidated revenues of the entities with which the broker-dealer is affiliated, and the revenue from all such professional or consulting services accounts for a material portion of either the revenues received by the director or the revenues received by the director's firm or partnership.

Notwithstanding the foregoing, a director shall not be deemed to be an "Industry Director" solely because either (A) the person is or was within the prior three years an outside director of a broker-dealer or an outside director of an entity that is affiliated with a broker-dealer, provided that the broker-dealer is not an Exchange Member or otherwise subject to regulation by the Exchange, or (B) the person is or was within the prior three years associated with an entity that is affiliated with a broker-dealer whose revenues do not account for a material portion of the consolidated revenues of the entities with which the broker-dealer is affiliated, provided that the broker-dealer is not an Exchange Member or otherwise subject to regulation by the Exchange. At all times, at least one Non-Industry Director shall be a Non-Industry Director exclusive of the exceptions provided for in the immediately preceding sentence and shall have no material business relationship with a broker or dealer or the Exchange or any of its affiliates. For purposes of this Section 3.1, the term "outside director" shall mean a director of an entity who is not an employee or officer (or any person occupying a similar status or performing similar functions) of such entity.

The Board of Directors of the Exchange or the Nominating and Governance Committee of the Board shall make all materiality determinations under the foregoing two paragraphs. A director shall qualify as a Non-Industry Director only so long as such director meets the requirements for that position.

Directors will serve one-year terms ending on the annual meeting following the meeting at which such directors were elected or at such time as their successors are elected or appointed and qualified, except in the event of earlier death, resignation, disqualification or removal.

Only persons who are nominated as Representative Directors by the Nominating and Governance Committee shall be eligible for election as Representative Directors. The Nominating and Governance Committee shall be bound to accept and nominate the Representative Director nominees recommended by the Representative Director Nominating Body, provided that the Representative Director nominees are not opposed by a petition candidate as forth in Section 3.2 below. If such Representative Director nominees are opposed by a petition candidate then the Nominating and Governance Committee shall be bound to accept and nominate the Representative Director nominees who receive the most votes pursuant to a Run-off Election as set forth in Section 3.2 below.

The Nominating and Governance Committee shall determine, subject to review by the Board, whether a director candidate satisfies the applicable qualifications for election as a director, and the decision of that committee shall, subject to review, if any, by the Board, be final.

Section 3.2. Nomination of Representative Directors.

The Representative Director Nominating Body shall recommend a number of directors that equals 20% of the total number of directors serving on the Board (the "Representative Director(s)"), provided that if 20% of the directors then serving on the Board is not a whole number, such number of Representative Directors shall be rounded up to the next whole number. Directors not recommended by the Representative Director Nominating Body shall be nominated by the Nominating and Governance Committee. Any person nominated by the Representative Director Nominating Body and any petition candidate nominated pursuant to this Section 3.2 shall satisfy the compositional requirements determined by the Board from time to time pursuant to a resolution adopted by the Board in accordance with Section 3.1, designating the number of Representative Directors that are Non-Industry Directors and Industry Directors (if any).

The Representative Director Nominating Body shall provide a mechanism for Exchange Members to provide input to the Representative Director Nominating Body with respect to nominees for the Representative Directors. The Representative Director Nominating Body shall issue a circular to Exchange Members identifying the Representative Director nominees selected by the Representative Director Nominating Body not earlier than December 1st and not later than January 15th, or the first business day thereafter if January 15th is not a business day.

Exchange Members may nominate alternative candidates for election to the Representative Director positions to be elected in a given year by submitting a petition signed by individuals representing not less than 10% of the Exchange Members at that time. Petitions must be filed with the Secretary no later than 5:00 p.m. (Chicago time) on the 10th business day following the issuance of the circular to the Exchange Members identifying the Representative Director nominees selected by the Representative Director Nominating Body (the "Petition Deadline"). The names of all Representative Director nominees recommended by the Representative Director Nominating Body and those selected pursuant to a valid and timely petition shall, immediately following their selection, be given to the Secretary who shall promptly issue a circular to all of the Exchange Members identifying all such Representative Director candidates.

If one or more valid petitions are received, the Secretary shall issue a circular to all of the Exchange Members identifying those individuals nominated for Representative Director by the Representative Director Nominating Body and those individuals nominated for Representative Director through the petition process as well as of the time and date of a run-off election to determine which individuals will be nominated as Representative Director(s) by the Nominating and Governance Committee (the "Run-off Election"). The Run-off Election will be held not more than 45 days after the Petition Deadline. In any Run-off Election, each Exchange Member shall have one vote for each Representative Director position to be filled that year; provided, however, that no Exchange Member, either alone or together with its affiliates, may account for more than 20% of the votes cast for a candidate, and any votes cast by an Exchange Member, either alone or together with its affiliates, in excess of this 20% limitation shall be disregarded. Votes may be cast in person or by proxy. Additionally, in any Run-off Election, one-third of the Exchange Members entitled to vote, when present in person or represented by proxy, shall

constitute a quorum for purposes of the Run-off Election. The Secretary shall issue a circular to all of the Exchange Members setting forth the results of the Run-off Election. The number of individual Representative Director nominees equal to the number of Representative Director positions to be filled that year receiving the largest number of votes in the Run-off Election (after taking into account the voting limitation set forth herein) will be the persons approved by the Exchange Members to be nominated as the Representative Director(s) by the Nominating and Governance Committee for that year.

Section 3.3. Powers of the Board.

The Board shall be the governing body of the Corporation and shall be vested with all powers necessary for the management of the business and affairs of the Corporation and for the promotion of its welfare, objects and purposes. The Board shall regulate the business conduct of Exchange Members and may exercise all such powers of the Corporation and do all such lawful acts and things as are not by statute or the Certificate of Incorporation directed or required to be exercised or done by others. In the exercise of such powers, the Board may organize such subsidiary corporations, impose such fees and charges, adopt or amend such Rules, issue such orders and directions, and make such decisions as it deems necessary or appropriate. It may prescribe and impose penalties for violations of the Rules, for neglect or refusal to comply with orders, directions or decisions of the Board, or for any other offenses against the Corporation.

Section 3.4. Resignation, Disqualification and Removal of Directors.

(a) A director may resign at any time by giving written notice of his resignation to the Chairman of the Board or the Secretary, and such resignation, unless specifically contingent upon its acceptance, will be effective as of its date or of the date specified therein.

(b) In the event any Industry Director or Non-Industry Director fails to maintain the qualifications required for such category of director in Section 3.1 hereof, of which failure the Board shall be the sole judge, the term of office of such director shall terminate and such director shall thereupon cease to be a director, his office shall become vacant and, notwithstanding any provision to the contrary, the vacancy may be filled by the Board with a person who qualifies for the category in which the vacancy exists. Notwithstanding the foregoing, unless otherwise required by statute, the Certificate of Incorporation, regulations of the Securities and Exchange Commission ("SEC") or, if applicable, the regulations of any listing exchange on which the Corporation is listed, a director who fails to maintain the applicable qualifications may be allowed the later of (i) 45 days from the date when the Board determines the director is unqualified or (ii) until the next regular Board meeting following the date when the Board makes such determination, in which to requalify. Following the date when the Board determines the director is unqualified, the director shall be deemed not to hold office and the seat formerly held by the director shall be deemed to be vacant for all purposes. The Board shall be the sole judge of whether the director has requalified. If a director is determined to have requalified, the Board, in its sole discretion, may fill an existing vacancy in the Board or may increase the size of the Board, as necessary, to appoint such director to the Board; provided, however, that the Board shall be under no obligation to return such director to the Board.

(c) No Representative Director may be removed from office by a vote of the stockholders at any time except for cause, which shall include, but not be limited to (i) a breach of a Representative Director's duty of loyalty to the Corporation or its stockholders, (ii) acts or

omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) transactions from which a Representative Director derived an improper personal benefit, or (iv) a failure of a Representative Director to be free from a statutory disqualification (as defined in Section 3(a)(39) of the Act). Any Representative Director may be removed for cause by the holders of a majority of the shares of stock then entitled to be voted at an election of directors.

Section 3.5. Filling of Vacancies.

(a) Notwithstanding any provision herein to the contrary, any vacancy in the Board, however occurring, including a vacancy resulting from an increase in the number of the directors, may be filled by vote of a majority of the directors then in office, although less than a quorum, or by a sole remaining director, provided such new director qualifies for the category in which the vacancy exists. A director elected to fill a vacancy shall hold office until the next annual meeting of stockholders, subject to the election and qualification of his or her successor and to his or her earlier death, resignation, disqualification or removal.

(b) If the Board fills a vacancy resulting from a Representative Director position becoming vacant prior to the expiration of such Representative Director's term, or resulting from the creation of an additional Representative Director position required by an increase in the size of the Board, then the Board shall follow the procedures set forth in this Section 3.5(b). In such an event, the Representative Director Nominating Body shall either (i) recommend an individual to the Board to be elected to fill such vacancy or (ii) provide a list of recommended individuals to the Board from which the Board shall elect the individual to fill such vacancy. The Board shall elect, pursuant to this Section 3.5(b), only individuals recommended by the Representative Director Nominating Body; provided, however, the Board shall not be required to take any action or elect any individual if the Board believes that taking such action or electing such individual would be contrary to the Board's fiduciary duties. Any vacancy filled pursuant to this Section 3.5(b), shall be filled by the vote of a majority of the directors then in office, although less than a quorum. The Representative Director Nominating Body shall only recommend individuals to fill a vacancy in a Representative Director position who satisfy the compositional requirements designated by the Board from time to time pursuant to resolution adopted by the Board in accordance with Section 3.1, designating the number of Representative Directors that are Non-Industry Directors and Industry Directors (if any).

Section 3.6. Chairman of the Board of Directors.

The Board shall appoint one of the directors to serve as Chairman of the Board. Except as provided for in Section 3.7 hereof, the Chairman of the Board shall be the presiding officer at all meetings of the Board and stockholders and shall exercise such other powers and perform such other duties as are delegated to him or her by the Board.

Section 3.7. Lead Director.

The Board may appoint one of the Non-Industry Directors to serve as the Lead Director. The Lead Director shall perform such duties and possess such powers as the Board may from time to time prescribe. The Lead Director, if appointed, shall be authorized to preside at meetings of the directors that are not officers or employees of the Exchange.

Section 3.8. Acting Chairman and Vacancy in Chairman Position.

(a) In the absence or inability to act of the Chairman of the Board, the Board may designate an Acting Chairman of the Board. The Acting Chairman of the Board, in the absence or inability to act of the Chairman, shall be presiding officer at all meetings of the Board and shall exercise such other powers and perform such other duties as are delegated to the Acting Chairman by the Board.

(b) If a vacancy occurs in the office of Chairman, the Board may fill such vacancy by the affirmative vote of at least a majority of the directors then in office.

Section 3.9. Quorum.

At all meetings of the Board, two-thirds of the number of directors then in office shall constitute a quorum for the transaction of business, and the vote of a majority of the directors present at any meeting at which a quorum is present shall be the act of the Board, except as may be otherwise specifically provided by statute or the Certificate of Incorporation. If a quorum shall not be present at any meeting of the Board, a majority of the directors present thereat may adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum shall be present.

Section 3.10. Regular Meetings.

Regular meetings of the Board shall be held at such time and at such place as shall from time to time be determined by the Chairman of the Board with notice of such determination provided to the full Board.

Section 3.11. Special Meetings.

Special meetings of the Board may be called by the Chairman of the Board and shall be called by the Secretary upon the written request of any four directors. The Secretary shall give at least 24 hours notice of such meeting to each director, in a manner permitted by Section 7.1. Every such notice shall state the time and place of the meeting which shall be fixed by the person calling the meeting, but need not state the purpose thereof except as otherwise required by statute.

Section 3.12. Participation in Meeting.

Members of the Board or of any committee thereof may participate in a meeting of the Board or such committee by conference telephone or other communications equipment by means of which all persons participating in the meeting can hear each other, and such participation in a meeting shall constitute presence in person at such a meeting.

Section 3.13. Action by Written Consent.

Unless otherwise restricted by statute or the Certificate of Incorporation, any action required or permitted to be taken at any meeting of the Board or of any committee thereof may be taken without a meeting if all members of the Board or such committee, as the case may be, consent thereto in writing or by electronic transmission, and the writing or writings or electronic transmission or transmissions are filed with the minutes of proceedings of the Board or of such committee.

Section 3.14. Interested Directors.

No director shall be disqualified from participating in any meeting, action or proceeding of the Board by reason of being or having been a member of a committee which has made prior inquiry, examination or investigation of the subject under consideration. No director shall participate in the adjudication of any matter with respect to which the Board is acting as an adjudicative body under the Rules, and in which such director is personally interested, although interested directors may be counted in determining the presence of a quorum at the meeting of the Board or of a committee which authorizes actions with respect to such matter.

ARTICLE IV Committees

Section 4.1. Designation of Committees.

(a) Committees of the Board. The committees of the Board shall consist of an Executive Committee, a Regulatory Oversight Committee, a Nominating and Governance Committee and such other standing and special committees as may be approved by the Board. Except as may be otherwise provided in these Bylaws or as may be otherwise provided for from time to time by resolution of the Board, the Board may, at any time, with or without cause, remove any member of any such committees of the Board.

(b) Committees of the Exchange. The Exchange also shall have such committees as may be provided in these Bylaws or the Rules or as may be from time to time created by the Board. Except as may be otherwise provided in these Bylaws, the Rules or the resolution of the Board establishing any such other committee, the Chief Executive Officer or his or her designee, with the approval of the Board, shall appoint the members of such Exchange committees (other than the committees of the Board) and may designate, with the approval of the Board, a Chairman and a Vice-Chairman thereof. Except as may be otherwise provided in these Bylaws or the Rules, the Chief Executive Officer or his or her designee, with the approval of the Board, may, at any time, with or without cause, remove any member of any such Exchange committees.

Section 4.2. The Executive Committee.

The Executive Committee will include the Chairman of the Board, the Chief Executive Officer (if a director), the Lead Director, if any, at least one Representative Director and such other number of directors that the Board deems appropriate, provided that in no event shall the number of Non-Industry Directors constitute less than the number of Industry Directors serving on the Executive Committee (excluding the Chief Executive Officer from the calculation of Industry Directors for such purpose). Members of the Executive Committee (other than those specified in the immediately preceding sentence) shall be recommended by the Nominating and Governance Committee for approval by the Board. Members of the Executive Committee shall not be subject to removal except by the Board. The Chairman of the Board shall be the Chairman of the Executive Committee. Each member of this Committee shall be a voting member. The members of the Executive Committee shall serve for a term of one year expiring at the first regular meeting of directors following the annual meeting of stockholders each year or until their successors are appointed. The Executive Committee shall have and may exercise all the powers and authority of the Board in the management of the business and affairs of the Corporation, except it shall not have the power and authority of the Board to (i) approve or adopt or recommend to the stockholders any action or matter (other than the election or removal of

directors) expressly required by Delaware law to be submitted to stockholders for approval, including without limitation, amending the Certificate of Incorporation, adopting an agreement of merger or consolidation, approving a sale, lease or exchange of all or substantially all of the Corporation's property and assets, or approval of a dissolution of the Corporation or revocation of a dissolution, or (ii) adopt, alter, amend or repeal any bylaw of the Corporation.

Section 4.3. The Nominating and Governance Committee.

The Nominating and Governance Committee shall consist of at least five directors and shall at all times have a majority of directors that are Non-Industry Directors. All members of the committee shall be recommended by the Nominating and Governance Committee for approval by the Board. The exact number of Nominating and Governance Committee members shall be determined from time to time by the Board. Members of the Nominating and Governance Committee shall not be subject to removal except by the Board. The Chairman of the Nominating and Governance Committee shall be recommended by the Nominating and Governance Committee for approval by the Board. Subject to Section 3.2 and Section 3.5 of these Bylaws, the Nominating and Governance Committee shall have the authority to nominate individuals for election as directors of the Corporation. The Nominating and Governance Committee shall have such other duties and may exercise such other authority as may be prescribed by resolution of the Board and the Nominating and Governance Committee Charter as adopted by resolution of the Board. If the Nominating and Governance Committee has two or more Industry Directors, there shall be an Industry-Director Subcommittee consisting of all of the Industry Directors then serving on the Nominating and Governance Committee, which shall act as the Representative Director Nominating Body if and to the extent required by these Bylaws.

Section 4.4. The Regulatory Oversight Committee.

The Regulatory Oversight Committee shall consist of at least three directors, all of whom shall be Non-Industry Directors and all of whom shall be recommended by the Non-Industry Directors on the Nominating and Governance Committee for approval by the Board. The exact number of Regulatory Oversight Committee members shall be determined from time to time by the Board. Members of the Regulatory Oversight Committee shall not be subject to removal except by the Board. The Chairman of the Regulatory Oversight Committee shall be recommended by the Non-Industry Directors of the Nominating and Governance Committee for approval by the Board. The Regulatory Oversight Committee shall have such duties and may exercise such authority as may be prescribed by resolution of the Board, these Bylaws or the Rules of the Exchange.

Section 4.5. Other.

All other committees shall have such duties and may exercise such authority as may be prescribed for them by the Certificate of Incorporation, these Bylaws or the Rules or by resolution of the Board.

Section 4.6. Conduct of Proceedings.

Unless otherwise provided in the Certificate of Incorporation, these Bylaws, the Rules, the charter of the committee or by the Board of Directors by resolution, each committee may

determine the manner in which committee proceedings shall be conducted. In the absence of any such established procedures, each committee shall conduct its business in the same manner as the Board of Directors conducts its business pursuant to Article 3 of these Bylaws. Committees shall keep minutes of their meetings and periodically report their proceedings to the Board and appropriate committees of the Board to the extent requested by the Board or Board committee.

ARTICLE V Officers

Section 5.1. Designation; Number; Election.

(a) The officers of the Corporation shall be a Chief Executive Officer, a President, a Chief Financial Officer, one or more Vice-Presidents (the number thereof to be determined by the Board), a Secretary, a Treasurer, and such other officers as the Board may determine, including an Assistant Secretary and Assistant Treasurer. The Chief Executive Officer shall be appointed by an affirmative vote of the majority of the Board, and may, but need not be the Chairman of the Board. Such affirmative vote may also prescribe his duties not inconsistent with these Bylaws and may prescribe a tenure of office. The remaining officers of the Corporation shall be appointed by the Board, each to serve until a successor has been duly chosen and qualified or until the officer's earlier death, resignation or removal.

(b) Two or more offices may be held by the same person, except the offices of Chief Executive Officer and President. In addition, the Chief Executive Officer and the President may not also be either the Secretary or Assistant Secretary.

Section 5.2. Chief Executive Officer.

The Chief Executive Officer shall, subject to the direction of the Board, have general charge and supervision of the business of the Corporation. The Chief Executive Officer shall be the official representative of the Corporation in all public matters. The Chief Executive Officer shall perform such other duties and possess such other powers as the Board may from time to time prescribe and that are incident to such office. The Chief Executive Officer shall not engage in any other business during his incumbency except with approval of the Board, and by his acceptance of the office of Chief Executive Officer he shall be deemed to have agreed to uphold these Bylaws.

Section 5.3. President.

The President shall be the chief operating officer of the Corporation and shall perform such duties and possess such powers as the Board or the Chief Executive Officer may from time to time prescribe. In the event of the absence, inability or refusal to act of the Chief Executive Officer, the President shall perform the officer duties of the Chief Executive Officer and, when so performing, shall have all the powers of and be subject to all the restrictions upon the office of Chief Executive Officer.

Section 5.4. Chief Financial Officer.

The Chief Financial Officer shall perform such duties and possess such powers as the Board or the Chief Executive Officer may from time to time prescribe. The Chief Financial Officer shall have the custody of the Corporation's funds and securities; shall keep full and accurate all books and accounts of the Corporation as shall be necessary or desirable in accordance with

applicable law or generally accepted accounting principles; shall deposit all monies and other valuable effects in the name and to the credit of the Corporation as may be ordered by the Chief Executive Officer or the Board; shall cause the funds of the Corporation to be disbursed when such disbursements have been duly authorized, taking proper vouchers for such disbursements; and shall render to the Board, at its regular meeting or when the Board so requires, an account of the Corporation.

Section 5.5. Vice Presidents.

Vice Presidents shall perform the duties prescribed by the Board, Chief Executive Officer or President.

Section 5.6. Secretary.

The Secretary shall keep official records of meetings of stockholders and of Exchange Members at which action is taken and of all meetings of the Board; the Secretary shall, in person or by representative, perform like services for the standing and special committees when required; the Secretary shall give notice of meetings of stockholders and of Exchange Members and of special meetings of the Board in accordance with the provisions of the Rules or these Bylaws or as required by statute; the Secretary shall post all notices which may be required to be posted upon the Corporation website; the Secretary shall be custodian of the books, records, and corporate seal of the Corporation and attest, upon behalf of the Corporation, all contracts and other documents requiring authentication; the Secretary shall perform such other duties as may be prescribed by the Board, Chairman of the Board, Chief Executive Officer or President.

Section 5.7. Treasurer.

The Treasurer shall perform such duties and possess such powers as the Board, the Chief Executive Officer or the Chief Financial Officer may from time to time prescribe.

Section 5.8. Removals.

Any officer appointed by the Board may be removed at any time by the Board, the Chief Executive Officer or the President; provided that the Chief Executive Officer can only be removed by the Board. Any such removal shall be without prejudice to the contract rights, if any, of the person so removed. Any vacancies occurring in any office of the Corporation at any time may be filled by the Board or an officer authorized by the Board to appoint a person to hold such office.

Section 5.9. Resignations.

Any officer may resign by delivering such officer's written resignation to the Corporation at its principal office or to the Chief Executive Officer or Secretary. Such resignation shall be effective upon receipt unless it is specified to be effective at some other time or upon the happening of some other event.

Section 5.10. Vacancies.

The Board may fill any vacancy occurring in any office for any reason and may, in its discretion, leave unfilled for such period as it may determine any offices other than those of Chief Executive Officer, President, Secretary and Treasurer. Any vacancies occurring in any

office of the Corporation at any time also may be filled by an officer authorized by the Board to appoint a person to hold such office. Each such successor shall hold office until such officer's successor is elected and qualified, or until such officer's earlier death, resignation or removal.

Section 5.11. Salaries.

Officers of the Corporation shall be entitled to such salaries, compensation or reimbursement as shall be fixed or allowed from time to time by the Board unless otherwise delegated to a Committee of the Board or to members of senior management. No officer shall be prevented from receiving such salary by reason of the fact that the officer is also a director of the Corporation.

ARTICLE VI Advisory Board

Section 6.1. Advisory Board.

The Board may establish an Advisory Board which shall advise the Board and management regarding matters of interest to Exchange Members. If an Advisory Board is established it would consist of such number of members as set by the Board from time to time, including at least two members who are Exchange Members or persons associated with Exchange Members. The Chief Executive Officer, or his or her designee, shall be the Chairman of the Advisory Board. The members of the Advisory Board shall be recommended by the Nominating and Governance Committee for approval by the Board. There shall be an Exchange Member Subcommittee of the Advisory Board consisting of all members of the Advisory Board who are Exchange Members or persons associated with Exchange Members, which shall act as the Representative Director Nominating Body if and to the extent required by these Bylaws.

ARTICLE VII Notices

Section 7.1. Notices.

Except as provided in Section 7.2 and to the extent permitted by law, any notice required to be given by the Bylaws or the Rules or otherwise shall be deemed to have been given:

(a) in person upon delivery of the notice in person to the Person to whom such notice is addressed;

(b) by mail upon deposit of the notice in the United States mail, enclosed in a postage prepaid envelope;

(c) by messenger or overnight courier service upon provision of the notice to the messenger or courier service, provided that the delivery method does not require payment of the messenger or courier service fee to deliver the notice by the Person to whom the notice is addressed;

(d) by facsimile machine upon acknowledgment by the facsimile machine used to transmit the notice of the successful transmission of the notice;

(e) by electronic mail upon electronic transmission of the notice; and

(f) by telephone when received.

Any such notice must be addressed to its intended recipient at the intended recipient's address (including the intended recipient's business or residence address, facsimile number, electronic address, or telephone number, as applicable) as it appears on the books and records of the Corporation, or if no address appears on such books and records, then at such address as shall be otherwise known to the Secretary, or if no such address appears on such books and records, then in care of the registered agent of the Corporation in the State of Delaware. In the event that a notice is not provided in conformity with the provisions of this Section 7.1, the notice will be deemed to have been given to its intended recipient upon any receipt of the notice by its intended recipient.

Section 7.2. Electronic Notice to Stockholders.

Whenever any notice whatsoever is required to be given in writing to any stockholder by law, by the Certificate of Incorporation or by these Bylaws, such notice may be given by a form of electronic transmission if the stockholder to whom such notice is given has previously consented to the receipt of notice by electronic transmission.

Section 7.3. Waiver of Notice.

Whenever notice is required to be given under the provisions of any statute, the Certificate of Incorporation, these Bylaws, the Rules or otherwise, a written waiver thereof, signed by the Person entitled to notice, or his proxy, whether before or after the time stated therein shall be deemed equivalent to notice. Except as may be otherwise specifically provided by statute, any waiver by mail, messenger, overnight courier, facsimile machine, or electronic mail, bearing the name of the Person entitled to notice shall be deemed a written waiver duly signed. Attendance of a Person at a meeting, including attendance by proxy, shall constitute a waiver of notice of such meeting except when the Person attends a meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business the meeting is not lawfully called or convened. Except as required by statute or the Certificate of Incorporation, neither the business to be transacted at, nor the purpose of, any regular or special meeting of the stockholders, directors or any committee need be specified in any written waiver of notice.

ARTICLE VIII General Provisions

Section 8.1. Fiscal Year.

Except as otherwise determined from time to time by the Board, the fiscal year of the Corporation ends on the close of business on December 31 of each year.

Section 8.2. Checks, Drafts and Other Instruments.

All checks, drafts or other orders for the payment of money, notes or other evidences of indebtedness issued in the name of the Corporation shall be signed by such officer or officers, or by such agent or agents of the Corporation and in such manner as the Board may from time to time determine.

Section 8.3. Corporate Seal.

The corporate seal, if any, shall be in such form as shall be approved by the Board or an officer of the Corporation.

Section 8.4. Voting Securities.

Except as the Board may otherwise designate, the Chairman of the Board, Chief Executive Officer, Chief Financial Officer or Treasurer may waive notice of, and act as, or appoint any person or persons to act as, proxy or attorney-in-fact for the Corporation (with or without power of substitution) at, any meeting of stockholders or shareholders of any other corporation or organization, the securities of which may be held by this Corporation.

Section 8.5. Evidence of Authority.

A certificate by the Secretary, or Assistant Secretary, if any, as to any action taken by the stockholders, directors, a committee or any officer or representative of the Corporation shall, as to all Persons who rely on the certificate in good faith, be conclusive evidence of such action.

Section 8.6. Certificate of Incorporation.

All references in these Bylaws to the Certificate of Incorporation shall be deemed to refer to the Certificate of Incorporation of the Corporation, as amended, altered or restated and in effect from time to time.

Section 8.7. Transactions with Interested Parties.

No contract or transaction between the Corporation and one or more of the directors or officers, or between the Corporation and any other corporation, limited liability company, partnership, association or other organization in which one or more of the directors or officers are directors, managers or officers, or have a financial interest, shall be void or voidable solely for this reason, or solely because the director or officer is present at or participates in the meeting of the Board or a committee of the Board which authorizes the contract or transaction or solely because his, her or their votes are counted for such purpose, if:

(a) The material facts as to his, her or their relationship or interest and as to the contract or transaction are disclosed or are known to the Board or the committee, and the Board or committee in good faith authorizes the contract or transaction by the affirmative votes of a majority of the disinterested directors, even though the disinterested directors be less than a quorum;

(b) The material facts as to his, her or their relationship or interest and as to the contract or transaction are disclosed or are known to the stockholders entitled to vote thereon, and the contract or transaction is specifically approved in good faith by vote of the stockholders; or

(c) The contract or transaction is fair as to the Corporation as of the time it is authorized, approved or ratified by the Board, a committee of the Board or the stockholders.

Both (i) directors who are directors of both the Corporation and a party with whom the Corporation may be engaged in a transaction and (ii) interested directors may be counted in determining the presence of a quorum at a meeting of the Board or of a committee at which the contract or transaction is authorized.

Section 8.8. Severability.

Any determination that any provision of these Bylaws is for any reason inapplicable, illegal or ineffective shall not affect or invalidate any other provision of these Bylaws.

Section 8.9. Pronouns.

All pronouns used in these Bylaws shall be deemed to refer to the masculine, feminine or neuter, singular or plural, as the identity of the person or persons may require.

Section 8.10. Contracts.

In addition to the powers otherwise granted to officers pursuant to Article V hereof, the Board may authorize any officer or officers, or any agent or agents, of the Corporation to enter into any contract or to execute and deliver any instrument in the name of and on behalf of the Corporation, and such authority may be general or confined to specific instances.

Section 8.11. Loans.

The Corporation may, to the extent permitted by applicable law, lend money to, or guarantee any obligation of, or otherwise assist any officer or other employee of the Corporation or of its subsidiaries, including any officer or employee who is a director of the Corporation or its subsidiaries, whenever, in the judgment of the directors, such loan, guaranty or assistance may reasonably be expected to benefit the Corporation. The loan, guaranty or other assistance may include, without limitation, a pledge of shares of stock of the Corporation. Nothing in this Section 8.11 shall be deemed to deny, limit or restrict the powers of guaranty or warranty of the Corporation at common law or under any statute.

Section 8.12. Books and Records.

Subject to applicable law, the Board shall have power from time to time to determine to what extent and at what times and places and under what conditions and regulations the accounts and books of the Corporation, or any of them, shall be open to the inspection of the stockholders; and no stockholder shall have any right to inspect any account or book or document of the Corporation, except as conferred by the laws of the State of Delaware. The Corporation shall keep its books and records within the United States. Any books or records of the Corporation may be kept on, or be in the form of, magnetic tape, computer disk, or any other information storage device, provided that the records so kept can be converted into clearly legible form within a reasonable time.

Section 8.13. Section Headings.

Section headings in these Bylaws are for convenience of reference only and shall not be given any substantive effect in limiting or otherwise construing any provision herein.

Section 8.14. Inconsistent Provisions.

In the event that any provision of these Bylaws is or becomes inconsistent with any provision of the Certificate of Incorporation, the General Corporation Law of the State of Delaware ("DGCL") or any other applicable law, the provision of these Bylaws shall not be given any effect to the extent of such inconsistency but shall otherwise be given full force and effect.

ARTICLE IX Amendments

Section 9.1. By the Board.

These Bylaws may be altered, amended or repealed, or new Bylaws may be adopted, by the Board.

Section 9.2. By the Stockholders.

These Bylaws may be altered, amended or repealed or new Bylaws may be adopted by the affirmative vote of the majority of the stockholders present at any annual meeting of the stockholders at which a quorum is present.

Section 9.3. SEC Approval.

Before any amendment to, alteration or repeal of any provision of the Bylaws of the Corporation under this Article IX shall be effective, those changes shall be submitted to the Board and if the same must be filed with or filed with and approved by the SEC, then the proposed changes to the Bylaws of the Corporation shall not become effective until filed with or filed with and approved by the SEC, as the case may be.

ARTICLE X Rulemaking

Section 10.1. Rulemaking.

The Board may, by the affirmative vote of a majority of a quorum of the Board, alter, adopt, amend or repeal as it may deem necessary or proper any of the Corporation's Rules, which shall not become effective until filed with or filed with and approved by the SEC, as the case may be.

E Cboe EDGX Exchange, Inc.

Delaware

The First State

Page 1

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE RESTATED CERTIFICATE OF "BATS EDGX EXCHANGE, INC.", CHANGING ITS NAME FROM "BATS EDGX EXCHANGE, INC." TO "CBOE EDGX EXCHANGE, INC.", FILED IN THIS OFFICE ON THE SIXTEENTH DAY OF OCTOBER, A.D. 2017, AT 10:03 O'CLOCK P.M.

A FILED COPY OF THIS CERTIFICATE HAS BEEN FORWARDED TO THE NEW CASTLE COUNTY RECORDER OF DEEDS.




Jeffrey W. Bullock, Secretary of State

4662896 8100
SR# 20176643024

You may verify this certificate online at corp.delaware.gov/authver.shtml

Authentication: 203409170
Date: 10-17-17

**THIRD AMENDED AND RESTATED
CERTIFICATE OF INCORPORATION
of
BATS EDGX EXCHANGE, INC.**

The corporation filed its original Certificate of Incorporation with the Secretary of State of the State of Delaware on March 9, 2009 under the name EDGX Exchange, Inc. This Third Amended and Restated Certificate of Incorporation of the corporation, which only restates and integrates and does not further amend (except as permitted under Section 242(a)(1) of the General Corporation Law of the State of Delaware in order to change the name of the corporation) the provisions of the corporation's Second Amended and Restated Certificate of Incorporation, was duly adopted by the Board of Directors of the corporation in accordance with the provisions of Sections 242(b)(1) and 245 of the General Corporation Law of the State of Delaware. The Second Amended and Restated Certificate of Incorporation of the corporation is hereby amended, integrated and restated to read in its entirety as follows:

FIRST: The name of the corporation (the "Corporation") is Cboe EDGX Exchange, Inc.

SECOND: The address of the registered office of the Corporation in the State of Delaware is Corporation Trust Center, 1209 Orange Street, in the City of Wilmington, County of New Castle, Delaware 19801-1297. The name of the Corporation's registered agent at such address shall be The Corporation Trust Company.

THIRD: The nature of the business or purposes to be conducted or promoted by the Corporation is:

(a) To conduct and carry on the function of an "exchange" within the meaning of that term in the Securities Exchange Act of 1934, as amended (the "Act");

(b) To provide a securities market place with high standards of honor and integrity among its Exchange Members and other persons holding rights to access the Corporation's facilities and to promote and maintain just and equitable principles of trade and business. The term "Exchange Member" shall have the meaning given to that term in Section 1.1 of the Corporation's Bylaws, as the same may be amended from time to time (the "Corporation's Bylaws"); and

(c) To engage in any other lawful act or activity for which corporations may be organized under the General Corporation Law of the State of Delaware ("GCL").

FOURTH: The total number of shares of stock which the Corporation shall have authority to issue is one thousand (1,000) shares of common stock having a par value of \$0.01 per share (the "Common Stock"). Direct Edge LLC will be the sole owner of the Common Stock. Any sale, transfer or assignment by Direct Edge LLC Inc. of any shares of Common Stock will be subject to prior approval by the Securities and Exchange Commission (the "Commission") pursuant to the rule filing procedure under Section 19 of the Act.

FIFTH: (a) The governing body of the Corporation shall be its Board of Directors. The business and affairs of the Corporation shall be managed by or under the direction of the Board of Directors.

(b) The Board of Directors of the Corporation shall consist of not less than 5 directors, the exact number to be fixed in accordance with the Corporation's Bylaws.

(c) Only persons who are nominated by the Nominating and Governance Committee shall be eligible for election as directors. The Nominating and Governance Committee shall be bound to accept and nominate (a) the individual(s) recommended by the Representative Director Nominating Body (as defined in the Corporation's Bylaws) for nomination as Representative Director (as defined in the Corporation's Bylaws), provided that the individuals so nominated by the Representative Director Nominating Body are not opposed by a petition candidate or (b) the individual(s) who receive the most votes pursuant to a petition election as set forth in Section 3.2 of the Corporation's Bylaws; provided, however, that any individual(s) recommended by the Representative Director Nominating Body and any individual(s) who are petition candidates pursuant to clause (b) of the preceding sentence shall satisfy the compositional requirements determined by the Board of Directors from time to time pursuant to a resolution adopted by the Board in accordance with Section 3.1 of the Corporation's Bylaws, designating the number of Representative Directors that are Non-Industry Directors and Industry Directors (if any), as such terms are defined in the Corporation's Bylaws; and provided further, that the Board of Directors and/or Nominating and Governance Committee, as applicable, shall make such determinations as to whether a director candidate satisfies applicable qualifications for election as a director pursuant to and in accordance with Section 3.1 of the Corporation's Bylaws.

(d) In discharging his or her responsibilities as a member of the Board of Directors, and to the fullest extent permitted by law, each director shall take into consideration the effect that his or her actions would have on the ability of the Corporation to carry out the Corporation's responsibilities under the Act and on the ability of the Corporation: to engage in conduct that fosters and does not interfere with the Corporation's ability to prevent fraudulent and manipulative acts and practices; to promote just and equitable principles of trade; to foster cooperation and coordination with persons engaged in regulating, clearing, settling, processing information with respect to, and facilitating transactions in securities; to remove impediments to and perfect the mechanisms of a free and open market and a national market system; and, in general, to protect investors and the public interest. In discharging his or her responsibilities as a member of the Board of Directors or as an officer or employee of the Corporation, each such director, officer or employee shall comply with the federal securities laws and the rules and regulations thereunder and shall cooperate with the Commission, and the Corporation pursuant to its regulatory authority.

SIXTH: (a) The Corporation shall, to the fullest extent permitted by applicable law as it presently exists or may hereafter be amended, indemnify and hold harmless any person (a "Covered Person") who was or is made or is threatened to be made a party or is otherwise involved in any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (a "proceeding"), by reason of the fact that he or she is or was a director, officer or member of a committee of the Corporation, or, while a director or officer of the Corporation, is or was serving at the request of the Corporation as a director or officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise or non-profit entity, including service with respect to employee benefit plans, against all liability and loss suffered and expenses (including attorneys' fees), judgment, fines and amounts paid in settlement actually and reasonably incurred by such Covered Person in connection with a proceeding. Notwithstanding the preceding sentence, except as otherwise provided in Section (c) of this Article Sixth, the Corporation shall be required to indemnify a Covered Person in connection with a proceeding (or part thereof) commenced by such Covered Person only if the commencement of such proceeding (or part thereof) by the Covered Person

was authorized in the specific case by the Board of Directors of the Corporation.

(b) Expenses (including attorneys' fees) incurred by a Covered Person in defending a proceeding, including appeals, shall, to the extent not prohibited by law, be paid by the Corporation in advance of the final disposition of such proceeding; provided, however, that the Corporation shall not be required to advance any expenses to a person against whom the Corporation directly brings an action, suit or proceeding alleging that such person (1) committed an act or omission not in good faith or (2) committed an act of intentional misconduct or a knowing violation of law. Additionally, an advancement of expenses incurred by a Covered Person shall be made only upon delivery to the Corporation of an undertaking, by or on behalf of such Covered Person, to repay all amounts so advanced if it shall ultimately be determined by final judicial decision from which there is no further right to appeal or otherwise in accordance with Delaware law that such Covered Person is not entitled to be indemnified for such expenses under this Article Sixth.

(c) If a claim for indemnification (following the final disposition of such action, suit or proceeding) or advancement of expenses under this Article Sixth is not paid in full within thirty days after a written claim therefor by the Covered Person has been received by the Corporation, the Covered Person may file suit to recover the unpaid amount of such claim and, if successful in whole or in part, shall be entitled to be paid the expense of prosecuting such claim to the fullest extent permitted by law. In any action the Corporation shall have the burden of proving that the Covered Person is not entitled to the requested indemnification or advancement of expenses under applicable law.

(d) The provisions of this Article Sixth shall be deemed to be a contract between the Corporation and each Covered Person who serves in any such capacity at any time while this Article Sixth is in effect, and any repeal or modification of any applicable law or of this Article Sixth shall not affect any rights or obligations then existing with respect to any state of facts then or theretofore existing or any action, suit or proceeding theretofore or thereafter brought or threatened based in whole or in part upon any such state of facts.

(e) Persons not expressly covered by the foregoing provisions of this Article Sixth, such as those (x) who are or were employees or agents of the Corporation, or are or were serving at the request of the Corporation as employees or agents of another corporation, partnership, joint venture, trust or other enterprise, or (y) who are or were directors, officers, employees or agents of a constituent corporation absorbed in a consolidation or merger in which the Corporation was the resulting or surviving corporation, or who are or were serving at the request of such constituent corporation as directors, officers, employees or agents of another corporation, partnership, joint venture, trust or other enterprise, may be indemnified or advanced expenses to the extent authorized at any time or from time to time by the Board of Directors.

(f) The rights conferred on any Covered Person by this Article Sixth shall not be deemed exclusive of any other rights to which such Covered Person may be entitled by law or otherwise, and shall continue as to a person who has ceased to be a director, officer, employee or agent and shall inure to the benefit of the heirs, executors and administrators of such person.

(g) The Corporation's obligation, if any, to indemnify or to advance expenses to any Covered Person who was or is serving at its request as a director, officer, employee or agent of another corporation, partnership, joint venture, trust, enterprise or nonprofit entity shall be reduced by any amount such Covered Person may collect as indemnification or advancement of

expenses from such other corporation, partnership, joint venture, trust, enterprise or non-profit entity.

(h) Any repeal or modification of the foregoing provisions of this Article Sixth shall not adversely affect any right or protection hereunder of any Covered Person in respect of any act or omission occurring prior to the time of such repeal or modification.

(i) The Corporation may purchase and maintain insurance, at its expense, to protect itself and any director, manager, officer, trustee, employee or agent of the Corporation or another corporation, or of a partnership, limited liability company, joint venture, trust or other enterprise against any expense, liability or loss (as such terms are used in this Article Sixth), whether or not the Corporation would have the power to indemnify such person against such expense, liability or loss under the GCL.

SEVENTH: The Corporation reserves the right to amend this Certificate of Incorporation, and to change or repeal any provision of this Certificate of Incorporation, in the manner prescribed at the time by statute, and all rights conferred upon stockholders by this Certificate of Incorporation are granted subject to this reservation. Before any amendment to, or repeal of, any provision of this Certificate of Incorporation shall be effective, those changes shall be submitted to the Board of Directors of the Corporation and if such amendment or repeal must be filed with or filed with and approved by the Commission, then the proposed changes to this Certificate of Incorporation shall not become effective until filed with or filed with and approved by the Commission, as the case may be.

EIGHTH: A director of the Corporation shall not be liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director, except to the extent such exemption from liability or limitation thereof is not permitted under the GCL as the same exists or may hereafter be amended. Any amendment, modification or repeal of the foregoing sentence shall not adversely affect any right or protection of a director of the Corporation hereunder in respect of any act or omission occurring prior to the time of such amendment, modification or repeal.

NINTH: Unless and except to the extent that the Corporation's Bylaws shall so require, the election of directors of the Corporation need not be by written ballot.

TENTH: In furtherance and not in limitation of the powers conferred by the laws of the State of Delaware, the Board of Directors of the Corporation is expressly authorized to make, alter and repeal the Corporation's Bylaws.

ELEVENTH: To the fullest extent permitted by law, all confidential information pertaining to the self-regulatory function of the Corporation (including but not limited to disciplinary matters, trading data, trading practices and audit information) contained in the books and records of the Corporation shall: (i) not be made available to any persons other than to those officers, directors, employees and agents of the Corporation that have a reasonable need to know the contents thereof; (ii) be retained in confidence by the Corporation and the officers, directors, employees and agents of the Corporation; and (iii) not be used for any commercial purposes. Nothing in this Article Eleventh shall be interpreted as to limit or impede the rights of the Commission to access and examine such confidential information pursuant to the federal securities laws and the rules and regulations thereunder, or to limit or impede the ability of any

officers, directors, employees or agents of the Corporation to disclose such confidential information to the Commission.

IN WITNESS WHEREOF, BATS EDGX Exchange, Inc. has caused this certificate to be signed as of this 16th day of October, 2017.

BATS EDGX EXCHANGE, INC.

By: 

Name: Edward T. Tilly

Its: Chief Executive Officer

**EIGHTH AMENDED AND RESTATED
BYLAWS OF
CBOE EDGX EXCHANGE, INC.
ARTICLE I Definitions**

Section 1.1. Definitions.

When used in these Bylaws, except as expressly otherwise provided or unless the context otherwise requires:

- (a) The term “Act” means the Securities Exchange Act of 1934, as amended.
- (b) The term “affiliate” of a Person or “affiliated with” another Person means a Person who, directly or indirectly, controls, is controlled by, or is under common control with, such other person.
- (c) The term “Board” means the Board of Directors of the Corporation.
- (d) The term “Corporation” means Cboe EDGX Exchange, Inc.
- (e) The term “Exchange” means the Corporation, its exchange market and any facilities thereof.
- (f) The term “Exchange Member” shall have the same meaning as the term “Member” in the Rules of the Exchange.
- (g) The term “Person” shall mean an individual, partnership (general or limited), joint stock company, corporation, limited liability company, trust or unincorporated organization, or any governmental entity or agency or political subdivision thereof.
- (h) The term “Rules” means the rules of the Exchange as adopted or amended from time to time.
- (i) The term “associated with an entity” means any partner, officer or director of such entity (or any person occupying a similar status or performing similar functions), any person directly or indirectly controlling, controlled by, or under common control with such entity, or any employee of such entity.
- (j) The term “Representative Director Nominating Body” shall mean the Industry-Director Subcommittee of the Nominating and Governance Committee if there are at least two Industry Directors on the Nominating and Governance Committee. If the Nominating and Governance Committee has less than two Industry Directors, then the “Representative Director Nominating Body” shall mean the Exchange Member Subcommittee of the Advisory Board.

ARTICLE II Stockholders

Section 2.1. Place of Meetings.

All meetings of stockholders shall be held at such place within or without the State of Delaware as may be designated from time to time by the Board or the Chairman of the Board (or, if there is no Chairman of the Board, the Chief Executive Officer) or, if not so designated, at the principal place of business of the Corporation in Chicago, Illinois.

Section 2.2. Annual Meetings.

If required by applicable law, an annual meeting of stockholders shall be held on the third Tuesday in May of each year or such other date as may be fixed by the Board, at such time as may be designated by the Secretary prior to the giving of notice of the meeting, for the purpose of electing directors to fill expiring terms and any vacancies in unexpired terms and for the transaction of business as may properly come before the meeting. In no event shall the annual meeting date each year be prior to the completion of the process for the nomination of the Representative Directors for that annual meeting as set forth in Sections 3.1 and 3.2.

Section 2.3. Special Meetings.

Special meetings of stockholders, for any purpose or purposes, unless otherwise prescribed by statute or by the Certificate of Incorporation of the Corporation, may be called by the Chairman of the Board or by a majority of the Board.

Section 2.4. Notice of Stockholders' Meetings.

Unless otherwise prescribed by statute or the Certificate of Incorporation, notice of each meeting of stockholders, stating the date, time and place thereof, and, in the case of special meetings, the purpose or purposes for which such meeting is called, shall be given to each stockholder of record entitled to vote thereat not more than 60 days and at least 10 days before the date of the meeting.

Section 2.5 Quorum and Adjournments.

Except as otherwise provided by statute or the Certificate of Incorporation, a majority of the outstanding stock of the Corporation entitled to vote at the meeting, when present in person or represented by proxy, shall constitute a quorum at all meetings of stockholders for the transaction of business. If such quorum shall not be present or represented by proxy at any meeting of stockholders, holders of a majority of the stock present in person or represented by proxy at the meeting shall have power to adjourn the meeting from time to time, without notice other than announcement at the meeting unless otherwise required by statute, until a quorum shall be present or represented. At any such adjourned meeting at which a quorum is present, any business may be transacted which might have been transacted at the meeting as originally notified. Nothing in these Bylaws shall affect the right to adjourn a meeting from time to time where a quorum is present.

Section 2.6. Voting by Stockholders.

With respect to any question brought before a meeting, when a quorum is present, a majority of the votes properly cast on any question shall decide the question, unless the question is one

upon which by express provision of statute or the Certificate of Incorporation, a different vote is required, in which case such express provision shall govern and control. Notwithstanding the preceding sentence, a plurality of votes properly cast shall elect the directors.

Section 2.7. Determination of Stockholders of Record.

(a) The Board may fix a record date to determine the stockholders entitled to notice of and to vote at a meeting of stockholders or any adjournment thereof ("Record Date"). The Record Date shall not be more than 60 days nor less than 10 days before the date of the meeting.

(b) If no Record Date is fixed by the Board for a meeting of stockholders, the Record Date for the meeting shall be at the close of business on the day preceding the date on which notice of the meeting is given by the Corporation.

(c) A Record Date shall apply to any adjournment of a meeting of stockholders; provided, however, that the Board may fix a new Record Date for the adjourned meeting.

Section 2.8. Action by Written Consent of Stockholders.

Unless otherwise restricted by the Certificate of Incorporation, any corporate action upon which a vote of stockholders is required or permitted may be taken without a meeting, without prior notice and without a vote, if a consent in writing, setting forth the action so taken, shall be signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote on that matter were present and voted and shall be delivered to the Corporation in the manner required by law at its registered office within the State of Delaware or at its principal place of business or to an officer or agent of the Corporation having custody of the book in which proceedings of meetings of stockholders of the Corporation are recorded. Every written consent shall bear the date of signature of each stockholder who signs the consent and no written consent shall be effective to take the corporate action referred to in the consent unless, within 60 days of the earliest dated consent delivered to the Corporation, written consents signed by a sufficient number of holders to take action are delivered to the Corporation as required by these Bylaws or by applicable law. Prompt notice of the taking of the corporate action without a meeting by less than unanimous written consent shall be given to those stockholders who have not so consented in writing.

ARTICLE III Board of Directors

Section 3.1. Number, Election and Term of Office of Directors.

The Board shall consist of not less than 5 directors. The Board shall determine from time to time pursuant to resolution adopted by the Board the total number of directors, the number of Non-Industry Directors and Industry Directors (if any), and the number of Representative Directors that are Non-Industry Directors and Industry Directors (if any). In no event shall the number of Non-Industry Directors constitute less than the number of Industry Directors (excluding the Chief Executive Officer from the calculation of Industry Directors for such purpose). In addition, at all times at least 20% of directors serving on the Board shall be Representative Directors nominated (or otherwise selected through the petition process) as provided for in Section 3.2 by the Representative Director Nominating Body.

A “Non-Industry Director” is a person who is not an Industry Director.

An “Industry Director” is any director who (i) is an Exchange Member or otherwise subject to regulation by the Exchange; (ii) is a broker-dealer or an officer, director or employee of a broker-dealer or has been in any such capacity within the prior three years; (iii) is, or was within the prior three years, associated with an entity that is affiliated with a broker-dealer whose revenues account for a material portion of the consolidated revenues of the entities with which the broker-dealer is affiliated; (iv) has a material ownership interest in a broker-dealer and has investments in broker-dealers that account for a material portion of the director's net worth; (v) has a consulting or employment relationship with or has provided professional services to the Exchange or any of its affiliates or has had such a relationship or has provided such services within the prior three years; or (vi) provides, or has provided within the prior three years, professional or consulting services to a broker-dealer, or to an entity with a 50% or greater ownership interest in a broker-dealer whose revenues account for a material portion of the consolidated revenues of the entities with which the broker-dealer is affiliated, and the revenue from all such professional or consulting services accounts for a material portion of either the revenues received by the director or the revenues received by the director's firm or partnership.

Notwithstanding the foregoing, a director shall not be deemed to be an “Industry Director” solely because either (A) the person is or was within the prior three years an outside director of a broker-dealer or an outside director of an entity that is affiliated with a broker-dealer, provided that the broker-dealer is not an Exchange Member or otherwise subject to regulation by the Exchange, or (B) the person is or was within the prior three years associated with an entity that is affiliated with a broker-dealer whose revenues do not account for a material portion of the consolidated revenues of the entities with which the broker-dealer is affiliated, provided that the broker-dealer is not an Exchange Member or otherwise subject to regulation by the Exchange. At all times, at least one Non-Industry Director shall be a Non-Industry Director exclusive of the exceptions provided for in the immediately preceding sentence and shall have no material business relationship with a broker or dealer or the Exchange or any of its affiliates. For purposes of this Section 3.1, the term “outside director” shall mean a director of an entity who is not an employee or officer (or any person occupying a similar status or performing similar functions) of such entity.

The Board of Directors of the Exchange or the Nominating and Governance Committee of the Board shall make all materiality determinations under the foregoing two paragraphs. A director shall qualify as a Non-Industry Director only so long as such director meets the requirements for that position.

Directors will serve one-year terms ending on the annual meeting following the meeting at which such directors were elected or at such time as their successors are elected or appointed and qualified, except in the event of earlier death, resignation, disqualification or removal.

Only persons who are nominated as Representative Directors by the Nominating and Governance Committee shall be eligible for election as Representative Directors. The Nominating and Governance Committee shall be bound to accept and nominate the Representative Director nominees recommended by the Representative Director Nominating Body, provided that the Representative Director nominees are not opposed by a petition

candidate as forth in Section 3.2 below. If such Representative Director nominees are opposed by a petition candidate then the Nominating and Governance Committee shall be bound to accept and nominate the Representative Director nominees who receive the most votes pursuant to a Run-off Election as set forth in Section 3.2 below.

The Nominating and Governance Committee shall determine, subject to review by the Board, whether a director candidate satisfies the applicable qualifications for election as a director, and the decision of that committee shall, subject to review, if any, by the Board, be final.

Section 3.2. Nomination of Representative Directors.

The Representative Director Nominating Body shall recommend a number of directors that equals 20% of the total number of directors serving on the Board (the "Representative Director(s)"), provided that if 20% of the directors then serving on the Board is not a whole number, such number of Representative Directors shall be rounded up to the next whole number. Directors not recommended by the Representative Director Nominating Body shall be nominated by the Nominating and Governance Committee. Any person nominated by the Representative Director Nominating Body and any petition candidate nominated pursuant to this Section 3.2 shall satisfy the compositional requirements determined by the Board from time to time pursuant to a resolution adopted by the Board in accordance with Section 3.1, designating the number of Representative Directors that are Non-Industry Directors and Industry Directors (if any).

The Representative Director Nominating Body shall provide a mechanism for Exchange Members to provide input to the Representative Director Nominating Body with respect to nominees for the Representative Directors. The Representative Director Nominating Body shall issue a circular to Exchange Members identifying the Representative Director nominees selected by the Representative Director Nominating Body not earlier than December 1st and not later than January 15th, or the first business day thereafter if January 15th is not a business day.

Exchange Members may nominate alternative candidates for election to the Representative Director positions to be elected in a given year by submitting a petition signed by individuals representing not less than 10% of the Exchange Members at that time. Petitions must be filed with the Secretary no later than 5:00 p.m. (Chicago time) on the 10th business day following the issuance of the circular to the Exchange Members identifying the Representative Director nominees selected by the Representative Director Nominating Body (the "Petition Deadline"). The names of all Representative Director nominees recommended by the Representative Director Nominating Body and those selected pursuant to a valid and timely petition shall, immediately following their selection, be given to the Secretary who shall promptly issue a circular to all of the Exchange Members identifying all such Representative Director candidates.

If one or more valid petitions are received, the Secretary shall issue a circular to all of the Exchange Members identifying those individuals nominated for Representative Director by the Representative Director Nominating Body and those individuals nominated for Representative Director through the petition process as well as of the time and date of a run-off election to determine which individuals will be nominated as Representative Director(s) by the Nominating and Governance Committee (the "Run-off Election"). The Run-off Election will be held not more than 45 days after the Petition Deadline. In any Run-off Election, each Exchange Member shall have one vote for each Representative Director position to be filled that year; provided,

however, that no Exchange Member, either alone or together with its affiliates, may account for more than 20% of the votes cast for a candidate, and any votes cast by an Exchange Member, either alone or together with its affiliates, in excess of this 20% limitation shall be disregarded. Votes may be cast in person or by proxy. Additionally, in any Run-off Election, one-third of the Exchange Members entitled to vote, when present in person or represented by proxy, shall constitute a quorum for purposes of the Run-off Election. The Secretary shall issue a circular to all of the Exchange Members setting forth the results of the Run-off Election. The number of individual Representative Director nominees equal to the number of Representative Director positions to be filled that year receiving the largest number of votes in the Run-off Election (after taking into account the voting limitation set forth herein) will be the persons approved by the Exchange Members to be nominated as the Representative Director(s) by the Nominating and Governance Committee for that year.

Section 3.3. Powers of the Board.

The Board shall be the governing body of the Corporation and shall be vested with all powers necessary for the management of the business and affairs of the Corporation and for the promotion of its welfare, objects and purposes. The Board shall regulate the business conduct of Exchange Members and may exercise all such powers of the Corporation and do all such lawful acts and things as are not by statute or the Certificate of Incorporation directed or required to be exercised or done by others. In the exercise of such powers, the Board may organize such subsidiary corporations, impose such fees and charges, adopt or amend such Rules, issue such orders and directions, and make such decisions as it deems necessary or appropriate. It may prescribe and impose penalties for violations of the Rules, for neglect or refusal to comply with orders, directions or decisions of the Board, or for any other offenses against the Corporation.

Section 3.4. Resignation, Disqualification and Removal of Directors.

(a) A director may resign at any time by giving written notice of his resignation to the Chairman of the Board or the Secretary, and such resignation, unless specifically contingent upon its acceptance, will be effective as of its date or of the date specified therein.

(b) In the event any Industry Director or Non-Industry Director fails to maintain the qualifications required for such category of director in Section 3.1 hereof, of which failure the Board shall be the sole judge, the term of office of such director shall terminate and such director shall thereupon cease to be a director, his office shall become vacant and, notwithstanding any provision to the contrary, the vacancy may be filled by the Board with a person who qualifies for the category in which the vacancy exists. Notwithstanding the foregoing, unless otherwise required by statute, the Certificate of Incorporation, regulations of the Securities and Exchange Commission ("SEC") or, if applicable, the regulations of any listing exchange on which the Corporation is listed, a director who fails to maintain the applicable qualifications may be allowed the later of (i) 45 days from the date when the Board determines the director is unqualified or (ii) until the next regular Board meeting following the date when the Board makes such determination, in which to requalify. Following the date when the Board determines the director is unqualified, the director shall be deemed not to hold office and the seat formerly held by the director shall be deemed to be vacant for all purposes. The Board shall be the sole judge of whether the director has requalified. If a director is determined to have requalified, the Board, in its sole discretion, may fill an existing vacancy in the Board or may increase the size of the

Board, as necessary, to appoint such director to the Board; provided, however, that the Board shall be under no obligation to return such director to the Board.

(c) No Representative Director may be removed from office by a vote of the stockholders at any time except for cause, which shall include, but not be limited to (i) a breach of a Representative Director's duty of loyalty to the Corporation or its stockholders, (ii) acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) transactions from which a Representative Director derived an improper personal benefit, or (iv) a failure of a Representative Director to be free from a statutory disqualification (as defined in Section 3(a)(39) of the Act). Any Representative Director may be removed for cause by the holders of a majority of the shares of stock then entitled to be voted at an election of directors.

Section 3.5. Filling of Vacancies.

(a) Notwithstanding any provision herein to the contrary, any vacancy in the Board, however occurring, including a vacancy resulting from an increase in the number of the directors, may be filled by vote of a majority of the directors then in office, although less than a quorum, or by a sole remaining director, provided such new director qualifies for the category in which the vacancy exists. A director elected to fill a vacancy shall hold office until the next annual meeting of stockholders, subject to the election and qualification of his or her successor and to his or her earlier death, resignation, disqualification or removal.

(b) If the Board fills a vacancy resulting from a Representative Director position becoming vacant prior to the expiration of such Representative Director's term, or resulting from the creation of an additional Representative Director position required by an increase in the size of the Board, then the Board shall follow the procedures set forth in this Section 3.5(b). In such an event, the Representative Director Nominating Body shall either (i) recommend an individual to the Board to be elected to fill such vacancy or (ii) provide a list of recommended individuals to the Board from which the Board shall elect the individual to fill such vacancy. The Board shall elect, pursuant to this Section 3.5(b), only individuals recommended by the Representative Director Nominating Body; provided, however, the Board shall not be required to take any action or elect any individual if the Board believes that taking such action or electing such individual would be contrary to the Board's fiduciary duties. Any vacancy filled pursuant to this Section 3.5(b), shall be filled by the vote of a majority of the directors then in office, although less than a quorum. The Representative Director Nominating Body shall only recommend individuals to fill a vacancy in a Representative Director position who satisfy the compositional requirements designated by the Board from time to time pursuant to resolution adopted by the Board in accordance with Section 3.1, designating the number of Representative Directors that are Non-Industry Directors and Industry Directors (if any).

Section 3.6. Chairman of the Board of Directors.

The Board shall appoint one of the directors to serve as Chairman of the Board. Except as provided for in Section 3.7 hereof, the Chairman of the Board shall be the presiding officer at all meetings of the Board and stockholders and shall exercise such other powers and perform such other duties as are delegated to him or her by the Board.

Section 3.7. Lead Director.

The Board may appoint one of the Non-Industry Directors to serve as the Lead Director. The Lead Director shall perform such duties and possess such powers as the Board may from time to time prescribe. The Lead Director, if appointed, shall be authorized to preside at meetings of the directors that are not officers or employees of the Exchange.

Section 3.8. Acting Chairman and Vacancy in Chairman Position.

(a) In the absence or inability to act of the Chairman of the Board, the Board may designate an Acting Chairman of the Board. The Acting Chairman of the Board, in the absence or inability to act of the Chairman, shall be presiding officer at all meetings of the Board and shall exercise such other powers and perform such other duties as are delegated to the Acting Chairman by the Board.

(b) If a vacancy occurs in the office of Chairman, the Board may fill such vacancy by the affirmative vote of at least a majority of the directors then in office.

Section 3.9. Quorum.

At all meetings of the Board, two-thirds of the number of directors then in office shall constitute a quorum for the transaction of business, and the vote of a majority of the directors present at any meeting at which a quorum is present shall be the act of the Board, except as may be otherwise specifically provided by statute or the Certificate of Incorporation. If a quorum shall not be present at any meeting of the Board, a majority of the directors present thereat may adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum shall be present.

Section 3.10. Regular Meetings.

Regular meetings of the Board shall be held at such time and at such place as shall from time to time be determined by the Chairman of the Board with notice of such determination provided to the full Board.

Section 3.11. Special Meetings.

Special meetings of the Board may be called by the Chairman of the Board and shall be called by the Secretary upon the written request of any four directors. The Secretary shall give at least 24 hours notice of such meeting to each director, in a manner permitted by Section 7.1. Every such notice shall state the time and place of the meeting which shall be fixed by the person calling the meeting, but need not state the purpose thereof except as otherwise required by statute.

Section 3.12. Participation in Meeting.

Members of the Board or of any committee thereof may participate in a meeting of the Board or such committee by conference telephone or other communications equipment by means of which all persons participating in the meeting can hear each other, and such participation in a meeting shall constitute presence in person at such a meeting.

Section 3.13. Action by Written Consent.

Unless otherwise restricted by statute or the Certificate of Incorporation, any action required or permitted to be taken at any meeting of the Board or of any committee thereof may be taken without a meeting if all members of the Board or such committee, as the case may be, consent thereto in writing or by electronic transmission, and the writing or writings or electronic transmission or transmissions are filed with the minutes of proceedings of the Board or of such committee.

Section 3.14. Interested Directors.

No director shall be disqualified from participating in any meeting, action or proceeding of the Board by reason of being or having been a member of a committee which has made prior inquiry, examination or investigation of the subject under consideration. No director shall participate in the adjudication of any matter with respect to which the Board is acting as an adjudicative body under the Rules, and in which such director is personally interested, although interested directors may be counted in determining the presence of a quorum at the meeting of the Board or of a committee which authorizes actions with respect to such matter.

ARTICLE IV Committees

Section 4.1. Designation of Committees.

(a) Committees of the Board. The committees of the Board shall consist of an Executive Committee, a Regulatory Oversight Committee, a Nominating and Governance Committee and such other standing and special committees as may be approved by the Board. Except as may be otherwise provided in these Bylaws or as may be otherwise provided for from time to time by resolution of the Board, the Board may, at any time, with or without cause, remove any member of any such committees of the Board.

(b) Committees of the Exchange. The Exchange also shall have such committees as may be provided in these Bylaws or the Rules or as may be from time to time created by the Board. Except as may be otherwise provided in these Bylaws, the Rules or the resolution of the Board establishing any such other committee, the Chief Executive Officer or his or her designee, with the approval of the Board, shall appoint the members of such Exchange committees (other than the committees of the Board) and may designate, with the approval of the Board, a Chairman and a Vice-Chairman thereof. Except as may be otherwise provided in these Bylaws or the Rules, the Chief Executive Officer or his or her designee, with the approval of the Board, may, at any time, with or without cause, remove any member of any such Exchange committees.

Section 4.2. The Executive Committee.

The Executive Committee will include the Chairman of the Board, the Chief Executive Officer (if a director), the Lead Director, if any, at least one Representative Director and such other number of directors that the Board deems appropriate, provided that in no event shall the number of Non-Industry Directors constitute less than the number of Industry Directors serving on the Executive Committee (excluding the Chief Executive Officer from the calculation of Industry Directors for such purpose). Members of the Executive Committee (other than those specified in the immediately preceding sentence) shall be recommended by the Nominating and Governance Committee for approval by the Board. Members of the Executive Committee shall

not be subject to removal except by the Board. The Chairman of the Board shall be the Chairman of the Executive Committee. Each member of this Committee shall be a voting member. The members of the Executive Committee shall serve for a term of one year expiring at the first regular meeting of directors following the annual meeting of stockholders each year or until their successors are appointed. The Executive Committee shall have and may exercise all the powers and authority of the Board in the management of the business and affairs of the Corporation, except it shall not have the power and authority of the Board to (i) approve or adopt or recommend to the stockholders any action or matter (other than the election or removal of directors) expressly required by Delaware law to be submitted to stockholders for approval, including without limitation, amending the Certificate of Incorporation, adopting an agreement of merger or consolidation, approving a sale, lease or exchange of all or substantially all of the Corporation's property and assets, or approval of a dissolution of the Corporation or revocation of a dissolution, or (ii) adopt, alter, amend or repeal any bylaw of the Corporation.

Section 4.3. The Nominating and Governance Committee.

The Nominating and Governance Committee shall consist of at least five directors and shall at all times have a majority of directors that are Non-Industry Directors. All members of the committee shall be recommended by the Nominating and Governance Committee for approval by the Board. The exact number of Nominating and Governance Committee members shall be determined from time to time by the Board. Members of the Nominating and Governance Committee shall not be subject to removal except by the Board. The Chairman of the Nominating and Governance Committee shall be recommended by the Nominating and Governance Committee for approval by the Board. Subject to Section 3.2 and Section 3.5 of these Bylaws, the Nominating and Governance Committee shall have the authority to nominate individuals for election as directors of the Corporation. The Nominating and Governance Committee shall have such other duties and may exercise such other authority as may be prescribed by resolution of the Board and the Nominating and Governance Committee Charter as adopted by resolution of the Board. If the Nominating and Governance Committee has two or more Industry Directors, there shall be an Industry-Director Subcommittee consisting of all of the Industry Directors then serving on the Nominating and Governance Committee, which shall act as the Representative Director Nominating Body if and to the extent required by these Bylaws.

Section 4.4. The Regulatory Oversight Committee.

The Regulatory Oversight Committee shall consist of at least three directors, all of whom shall be Non-Industry Directors and all of whom shall be recommended by the Non-Industry Directors on the Nominating and Governance Committee for approval by the Board. The exact number of Regulatory Oversight Committee members shall be determined from time to time by the Board. Members of the Regulatory Oversight Committee shall not be subject to removal except by the Board. The Chairman of the Regulatory Oversight Committee shall be recommended by the Non-Industry Directors of the Nominating and Governance Committee for approval by the Board. The Regulatory Oversight Committee shall have such duties and may exercise such authority as may be prescribed by resolution of the Board, these Bylaws or the Rules of the Exchange.

Section 4.5. Other.

All other committees shall have such duties and may exercise such authority as may be prescribed for them by the Certificate of Incorporation, these Bylaws or the Rules or by resolution of the Board.

Section 4.6. Conduct of Proceedings.

Unless otherwise provided in the Certificate of Incorporation, these Bylaws, the Rules, the charter of the committee or by the Board of Directors by resolution, each committee may determine the manner in which committee proceedings shall be conducted. In the absence of any such established procedures, each committee shall conduct its business in the same manner as the Board of Directors conducts its business pursuant to Article 3 of these Bylaws. Committees shall keep minutes of their meetings and periodically report their proceedings to the Board and appropriate committees of the Board to the extent requested by the Board or Board committee.

ARTICLE V Officers

Section 5.1. Designation; Number; Election.

(a) The officers of the Corporation shall be a Chief Executive Officer, a President, a Chief Financial Officer, one or more Vice-Presidents (the number thereof to be determined by the Board), a Secretary, a Treasurer, and such other officers as the Board may determine, including an Assistant Secretary and Assistant Treasurer. The Chief Executive Officer shall be appointed by an affirmative vote of the majority of the Board, and may, but need not be the Chairman of the Board. Such affirmative vote may also prescribe his duties not inconsistent with these Bylaws and may prescribe a tenure of office. The remaining officers of the Corporation shall be appointed by the Board, each to serve until a successor has been duly chosen and qualified or until the officer's earlier death, resignation or removal.

(b) Two or more offices may be held by the same person, except the offices of Chief Executive Officer and President. In addition, the Chief Executive Officer and the President may not also be either the Secretary or Assistant Secretary.

Section 5.2. Chief Executive Officer.

The Chief Executive Officer shall, subject to the direction of the Board, have general charge and supervision of the business of the Corporation. The Chief Executive Officer shall be the official representative of the Corporation in all public matters. The Chief Executive Officer shall perform such other duties and possess such other powers as the Board may from time to time prescribe and that are incident to such office. The Chief Executive Officer shall not engage in any other business during his incumbency except with approval of the Board, and by his acceptance of the office of Chief Executive Officer he shall be deemed to have agreed to uphold these Bylaws.

Section 5.3. President.

The President shall be the chief operating officer of the Corporation and shall perform such duties and possess such powers as the Board or the Chief Executive Officer may from time to time prescribe. In the event of the absence, inability or refusal to act of the Chief Executive Officer, the President shall perform the officer duties of the Chief Executive Officer and, when

so performing, shall have all the powers of and be subject to all the restrictions upon the office of Chief Executive Officer.

Section 5.4. Chief Financial Officer.

The Chief Financial Officer shall perform such duties and possess such powers as the Board or the Chief Executive Officer may from time to time prescribe. The Chief Financial Officer shall have the custody of the Corporation's funds and securities; shall keep full and accurate all books and accounts of the Corporation as shall be necessary or desirable in accordance with applicable law or generally accepted accounting principles; shall deposit all monies and other valuable effects in the name and to the credit of the Corporation as may be ordered by the Chief Executive Officer or the Board; shall cause the funds of the Corporation to be disbursed when such disbursements have been duly authorized, taking proper vouchers for such disbursements; and shall render to the Board, at its regular meeting or when the Board so requires, an account of the Corporation.

Section 5.5. Vice Presidents.

Vice Presidents shall perform the duties prescribed by the Board, Chief Executive Officer or President.

Section 5.6. Secretary.

The Secretary shall keep official records of meetings of stockholders and of Exchange Members at which action is taken and of all meetings of the Board; the Secretary shall, in person or by representative, perform like services for the standing and special committees when required; the Secretary shall give notice of meetings of stockholders and of Exchange Members and of special meetings of the Board in accordance with the provisions of the Rules or these Bylaws or as required by statute; the Secretary shall post all notices which may be required to be posted upon the Corporation website; the Secretary shall be custodian of the books, records, and corporate seal of the Corporation and attest, upon behalf of the Corporation, all contracts and other documents requiring authentication; the Secretary shall perform such other duties as may be prescribed by the Board, Chairman of the Board, Chief Executive Officer or President.

Section 5.7. Treasurer.

The Treasurer shall perform such duties and possess such powers as the Board, the Chief Executive Officer or the Chief Financial Officer may from time to time prescribe.

Section 5.8. Removals.

Any officer appointed by the Board may be removed at any time by the Board, the Chief Executive Officer or the President; provided that the Chief Executive Officer can only be removed by the Board. Any such removal shall be without prejudice to the contract rights, if any, of the person so removed. Any vacancies occurring in any office of the Corporation at any time may be filled by the Board or an officer authorized by the Board to appoint a person to hold such office.

Section 5.9. Resignations.

Any officer may resign by delivering such officer's written resignation to the Corporation at its principal office or to the Chief Executive Officer or Secretary. Such resignation shall be effective upon receipt unless it is specified to be effective at some other time or upon the happening of some other event.

Section 5.10. Vacancies.

The Board may fill any vacancy occurring in any office for any reason and may, in its discretion, leave unfilled for such period as it may determine any offices other than those of Chief Executive Officer, President, Secretary and Treasurer. Any vacancies occurring in any office of the Corporation at any time also may be filled by an officer authorized by the Board to appoint a person to hold such office. Each such successor shall hold office until such officer's successor is elected and qualified, or until such officer's earlier death, resignation or removal.

Section 5.11. Salaries.

Officers of the Corporation shall be entitled to such salaries, compensation or reimbursement as shall be fixed or allowed from time to time by the Board unless otherwise delegated to a Committee of the Board or to members of senior management. No officer shall be prevented from receiving such salary by reason of the fact that the officer is also a director of the Corporation.

ARTICLE VI Advisory Board

Section 6.1. Advisory Board.

The Board may establish an Advisory Board which shall advise the Board and management regarding matters of interest to Exchange Members. If an Advisory Board is established it would consist of such number of members as set by the Board from time to time, including at least two members who are Exchange Members or persons associated with Exchange Members. The Chief Executive Officer, or his or her designee, shall be the Chairman of the Advisory Board. The members of the Advisory Board shall be recommended by the Nominating and Governance Committee for approval by the Board. There shall be an Exchange Member Subcommittee of the Advisory Board consisting of all members of the Advisory Board who are Exchange Members or persons associated with Exchange Members, which shall act as the Representative Director Nominating Body if and to the extent required by these Bylaws.

ARTICLE VII Notices

Section 7.1. Notices.

Except as provided in Section 7.2 and to the extent permitted by law, any notice required to be given by the Bylaws or the Rules or otherwise shall be deemed to have been given:

(a) in person upon delivery of the notice in person to the Person to whom such notice is addressed;

(b) by mail upon deposit of the notice in the United States mail, enclosed in a postage prepaid envelope;

(c) by messenger or overnight courier service upon provision of the notice to the messenger or courier service, provided that the delivery method does not require payment of the messenger or courier service fee to deliver the notice by the Person to whom the notice is addressed;

(d) by facsimile machine upon acknowledgment by the facsimile machine used to transmit the notice of the successful transmission of the notice;

(e) by electronic mail upon electronic transmission of the notice; and

(f) by telephone when received.

Any such notice must be addressed to its intended recipient at the intended recipient's address (including the intended recipient's business or residence address, facsimile number, electronic address, or telephone number, as applicable) as it appears on the books and records of the Corporation, or if no address appears on such books and records, then at such address as shall be otherwise known to the Secretary, or if no such address appears on such books and records, then in care of the registered agent of the Corporation in the State of Delaware. In the event that a notice is not provided in conformity with the provisions of this Section 7.1, the notice will be deemed to have been given to its intended recipient upon any receipt of the notice by its intended recipient.

Section 7.2. Electronic Notice to Stockholders.

Whenever any notice whatsoever is required to be given in writing to any stockholder by law, by the Certificate of Incorporation or by these Bylaws, such notice may be given by a form of electronic transmission if the stockholder to whom such notice is given has previously consented to the receipt of notice by electronic transmission.

Section 7.3. Waiver of Notice.

Whenever notice is required to be given under the provisions of any statute, the Certificate of Incorporation, these Bylaws, the Rules or otherwise, a written waiver thereof, signed by the Person entitled to notice, or his proxy, whether before or after the time stated therein shall be deemed equivalent to notice. Except as may be otherwise specifically provided by statute, any waiver by mail, messenger, overnight courier, facsimile machine, or electronic mail, bearing the name of the Person entitled to notice shall be deemed a written waiver duly signed. Attendance of a Person at a meeting, including attendance by proxy, shall constitute a waiver of notice of such meeting except when the Person attends a meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business the meeting is not lawfully called or convened. Except as required by statute or the Certificate of Incorporation, neither the business to be transacted at, nor the purpose of, any regular or special meeting of the stockholders, directors or any committee need be specified in any written waiver of notice.

ARTICLE VIII General Provisions

Section 8.1. Fiscal Year.

Except as otherwise determined from time to time by the Board, the fiscal year of the Corporation ends on the close of business on December 31 of each year.

Section 8.2. Checks, Drafts and Other Instruments.

All checks, drafts or other orders for the payment of money, notes or other evidences of indebtedness issued in the name of the Corporation shall be signed by such officer or officers, or by such agent or agents of the Corporation and in such manner as the Board may from time to time determine.

Section 8.3. Corporate Seal.

The corporate seal, if any, shall be in such form as shall be approved by the Board or an officer of the Corporation.

Section 8.4. Voting Securities.

Except as the Board may otherwise designate, the Chairman of the Board, Chief Executive Officer, Chief Financial Officer or Treasurer may waive notice of, and act as, or appoint any person or persons to act as, proxy or attorney-in-fact for the Corporation (with or without power of substitution) at, any meeting of stockholders or shareholders of any other corporation or organization, the securities of which may be held by this Corporation.

Section 8.5. Evidence of Authority.

A certificate by the Secretary, or Assistant Secretary, if any, as to any action taken by the stockholders, directors, a committee or any officer or representative of the Corporation shall, as to all Persons who rely on the certificate in good faith, be conclusive evidence of such action.

Section 8.6. Certificate of Incorporation.

All references in these Bylaws to the Certificate of Incorporation shall be deemed to refer to the Certificate of Incorporation of the Corporation, as amended, altered or restated and in effect from time to time.

Section 8.7. Transactions with Interested Parties.

No contract or transaction between the Corporation and one or more of the directors or officers, or between the Corporation and any other corporation, limited liability company, partnership, association or other organization in which one or more of the directors or officers are directors, managers or officers, or have a financial interest, shall be void or voidable solely for this reason, or solely because the director or officer is present at or participates in the meeting of the Board or a committee of the Board which authorizes the contract or transaction or solely because his, her or their votes are counted for such purpose, if:

(a) The material facts as to his, her or their relationship or interest and as to the contract or transaction are disclosed or are known to the Board or the committee, and the Board or committee in good faith authorizes the contract or transaction by the affirmative votes of a majority of the disinterested directors, even though the disinterested directors be less than a quorum;

(b) The material facts as to his, her or their relationship or interest and as to the contract or transaction are disclosed or are known to the stockholders entitled to vote thereon, and the contract or transaction is specifically approved in good faith by vote of the stockholders; or

(c) The contract or transaction is fair as to the Corporation as of the time it is authorized, approved or ratified by the Board, a committee of the Board or the stockholders.

Both (i) directors who are directors of both the Corporation and a party with whom the Corporation may be engaged in a transaction and (ii) interested directors may be counted in determining the presence of a quorum at a meeting of the Board or of a committee at which the contract or transaction is authorized.

Section 8.8. Severability.

Any determination that any provision of these Bylaws is for any reason inapplicable, illegal or ineffective shall not affect or invalidate any other provision of these Bylaws.

Section 8.9. Pronouns.

All pronouns used in these Bylaws shall be deemed to refer to the masculine, feminine or neuter, singular or plural, as the identity of the person or persons may require.

Section 8.10. Contracts.

In addition to the powers otherwise granted to officers pursuant to Article V hereof, the Board may authorize any officer or officers, or any agent or agents, of the Corporation to enter into any contract or to execute and deliver any instrument in the name of and on behalf of the Corporation, and such authority may be general or confined to specific instances.

Section 8.11. Loans.

The Corporation may, to the extent permitted by applicable law, lend money to, or guarantee any obligation of, or otherwise assist any officer or other employee of the Corporation or of its subsidiaries, including any officer or employee who is a director of the Corporation or its subsidiaries, whenever, in the judgment of the directors, such loan, guaranty or assistance may reasonably be expected to benefit the Corporation. The loan, guaranty or other assistance may include, without limitation, a pledge of shares of stock of the Corporation. Nothing in this Section 8.11 shall be deemed to deny, limit or restrict the powers of guaranty or warranty of the Corporation at common law or under any statute.

Section 8.12. Books and Records.

Subject to applicable law, the Board shall have power from time to time to determine to what extent and at what times and places and under what conditions and regulations the accounts and books of the Corporation, or any of them, shall be open to the inspection of the stockholders; and no stockholder shall have any right to inspect any account or book or document of the Corporation, except as conferred by the laws of the State of Delaware. The Corporation shall keep its books and records within the United States. Any books or records of the Corporation may be kept on, or be in the form of, magnetic tape, computer disk, or any other information storage device, provided that the records so kept can be converted into clearly legible form within a reasonable time.

Section 8.13. Section Headings.

Section headings in these Bylaws are for convenience of reference only and shall not be given any substantive effect in limiting or otherwise construing any provision herein.

Section 8.14. Inconsistent Provisions.

In the event that any provision of these Bylaws is or becomes inconsistent with any provision of the Certificate of Incorporation, the General Corporation Law of the State of Delaware ("DGCL") or any other applicable law, the provision of these Bylaws shall not be given any effect to the extent of such inconsistency but shall otherwise be given full force and effect.

ARTICLE IX Amendments

Section 9.1. By the Board.

These Bylaws may be altered, amended or repealed, or new Bylaws may be adopted, by the Board.

Section 9.2. By the Stockholders.

These Bylaws may be altered, amended or repealed or new Bylaws may be adopted by the affirmative vote of the majority of the stockholders present at any annual meeting of the stockholders at which a quorum is present.

Section 9.3. SEC Approval.

Before any amendment to, alteration or repeal of any provision of the Bylaws of the Corporation under this Article IX shall be effective, those changes shall be submitted to the Board and if the same must be filed with or filed with and approved by the SEC, then the proposed changes to the Bylaws of the Corporation shall not become effective until filed with or filed with and approved by the SEC, as the case may be.

ARTICLE X Rulemaking

Section 10.1. Rulemaking.

The Board may, by the affirmative vote of a majority of a quorum of the Board, alter, adopt, amend or repeal as it may deem necessary or proper any of the Corporation's Rules, which shall not become effective until filed with or filed with and approved by the SEC, as the case may be.

F Cboe Trading, Inc.

FOURTH AMENDED AND RESTATED

BYLAWS OF

CBOE TRADING, INC.

(a Delaware corporation)

ARTICLE I.

OFFICES

1.1. Principal and Business Offices. The corporation may have such principal and other business offices, either within or without the State of Delaware, as the Board of Directors may designate or as the business of the corporation may require from time to time.

1.2. Registered Office. The registered office of the corporation required by the Delaware General Corporation Law to be maintained in the State of Delaware may be, but need not be, identical with the principal office in the State of Delaware, and the address of the registered office may be changed from time to time by the Board of Directors or by the registered agent. The business office of the registered agent of the corporation shall be identical to such registered office.

ARTICLE II.

STOCKHOLDERS

2.1. Annual Meeting. The annual meeting of the stockholders shall be held on the 1st Monday in November of each year (unless that date shall be a non-business day or legal holiday, in which event the annual meeting of the stockholders shall be held the first business day immediately following such date) for the purposes of electing directors and for the transaction of such other business as may come before the meeting.

2.2. Special Meeting. Special meetings of the stockholders, for any purpose or purposes, unless otherwise prescribed by statute, may be called by the Board of Directors or the President or the Secretary or by the person, or in the manner, designated by the Board of Directors.

2.3. Place of Meeting. The Board of Directors may designate any place, either within or without the State of Delaware, as the place of meeting for any annual meeting or for any special meeting of stockholders called by the Board of Directors. If no designation is made, or if a special meeting be otherwise called, the place of meeting shall be the registered office of the corporation in the State of Delaware.

2.4. Notice of Meeting. Written notice stating the place, day and hour of the meeting of stockholders and, in case of a special meeting, the purpose or purposes for which the meeting is called, shall be delivered to each stockholder of record entitled to vote at such meeting not less than ten (10) days (unless a longer period is required by law or the articles of incorporation) not more than sixty (60) days before the date of the meeting, either personally or by mail, by or at the direction of the Board of Directors, the President, the Secretary, or any other officer or persons calling the meeting. If mailed, such notice shall be deemed to be delivered when deposited in the United States mail, addressed to the

stockholder at his address as it appears on the stock record books of the corporation, with postage thereon prepaid.

2.5. Adjournment. Any meeting of stockholders may be adjourned to reconvene at any place designated by vote of a majority of the shares represented thereat. At the adjourned meeting, the corporation may transact any business which might have been transacted at the original meeting. No notice of the time or place of an adjournment need be given if the time and place are announced at the meeting at which an adjournment is taken, unless the adjournment is for more than thirty (30) days or a new record date is fixed for the adjourned meeting, in which case notice of the adjourned meeting shall be given to each stockholder. Unless a new record date for the adjourned meeting is fixed, the determination of stockholders of record entitled to notice or to vote at the meeting at which adjournment is taken shall apply to the adjourned meeting.

2.6. Fixing of Record Date. For the purpose of determining stockholders entitled to notice of or to vote at any meeting of stockholders or any adjournment thereof, or stockholders entitled to receive payment of any dividend, or in order to make a determination of stockholders for any other proper purpose, the Board of Directors may fix in advance a date as the record date for any such determination of stockholders, such date in any case to be not more than sixty (60) days, and, in case of a meeting of stockholders, not less than ten (10) days prior to the date on which the particular action requiring such determination of stockholders is to be taken. If no record date is fixed, the record date for determining:

(a) stockholders entitled to notice of or to vote at a meeting of stockholders shall be at the close of business on the day next preceding the day on which notice is given or, if notice is waived, at the close of business on the day next preceding the day on which the meeting is held;

(b) stockholders entitled to express consent to a corporate action in writing without meeting shall be the day on which the first written consent is expressed; or

(c) stockholders for any other purpose shall be the close of business on the day on which the Board of Directors adopts the resolution relating thereto.

2.7. Voting Records. The officer having charge of the stock transfer books for shares of the corporation shall, at least ten (10) days before each meeting of stockholders, make a complete record of the stockholders entitled to vote at such meeting, arranged in alphabetical order, with the address of and the number of shares held by each. Such record shall be produced and kept open to the examination of any stockholders, for any purpose germane to the meeting, during ordinary business hours, for a period of at least ten (10) days prior to the meeting, either at a place within the city where the meeting is to be held as specified in the notice of the meeting or at the place of the meeting. The record shall also be produced and kept at the time and place of the meeting during the whole time thereof, and may be inspected by any stockholders present. The original stock transfer books shall be the only evidence as to who are the stockholders entitled to examine such record or transfer books or to vote at any meeting of stockholders.

2.8. Quorum. Except as otherwise provided in the certificate of incorporation, a majority of the shares entitled to vote, represented in person or by proxy, shall constitute a quorum at a meeting of stockholders, but in no event shall less than one-third of the shares entitled to vote constitute a quorum. If a quorum is present, the affirmative vote of the majority of the shares represented at the meeting and entitled to vote on the subject matter shall be the act of the stockholders unless the vote of a greater number or voting by classes is required by law or the certificates of incorporation. Though less than a quorum of the outstanding shares are represented at a meeting, a majority of the shares

represented at a meeting which initially had a quorum may adjourn the meeting from time to time without further notice.

2.9. Conduct of Meeting. The President or, in his absence, a Vice President in the order provided under Section 4.6 or, in their absence, any person chosen by the stockholders present, shall call the meeting of the stockholders to order and shall act as chairman of the meeting. The Secretary of the corporation shall act as secretary of all meetings of the stockholders, but, in the absence of the Secretary, the presiding officer may appoint any other person to act as secretary of the meeting.

2.10. Proxies. At all meetings of stockholders, a stockholder entitled to vote may vote in person, by proxy, appointed in writing by the stockholder, or by his duly authorized attorney in fact. Such proxy shall be filed with the Secretary of the Corporation before or at the time of the meeting. Unless otherwise provided in the proxy and supported by sufficient interest, a proxy may be revoked at any time before it is voted, either by written notice filed with the Secretary or the acting secretary, or by oral notice given by the stockholder to the presiding officer during the meeting. The presence of a stockholder who has filed a proxy shall not of itself constitute a revocation. No proxy shall be valid after three (3) years from the date of its execution, unless otherwise provided in the proxy. The Board of Directors shall have the power and authority to make rules establishing presumptions as to the validity and sufficiency of proxies.

2.11. Voting of Shares. Each outstanding share shall be entitled to one vote upon each matter submitted to a vote at a meeting of stockholders, except to the extent that the voting rights of the shares of any class or classes are enlarged, limited or denied by the certificate of incorporation.

2.12. Voting of Shares by Certain Holders.

(a) Other Corporations. Shares standing in the name of another corporation may be voted either in person or by proxy, by the president of such corporation or any other officer appointed by such president. A proxy executed by any principal officer of such other corporation or assistant thereto shall be conclusive evidence of the signer's authority to act, in the absence of express notice to this corporation, given in writing to the Secretary of this corporation, of the designation of some other person by the board of directors or the bylaws of such other corporation.

(b) Legal Representatives and Fiduciaries. Shares held by any administrator, executor, guardian, conservator, trustee in bankruptcy, receiver, or assignee for creditors may be voted by a duly executed proxy, without a transfer of such shares to his name. Shares standing in the name of a fiduciary may be voted by him, either in person or by proxy. A proxy executed by a fiduciary, shall be conclusive evidence of the signer's authority to act, in the absence of express notice to this corporation, given in writing to the Secretary of this corporation, that such manner of voting is expressly prohibited or otherwise directed by the document creating the fiduciary relationship.

(c) Pledges. A stockholder whose shares are pledged shall be entitled to vote such shares, unless in the transfer of the shares the pledgor has expressly authorized the pledgee to vote the shares and thereafter the pledgee, or his proxy, shall be entitled to vote the shares so transferred.

(d) Treasury Stock and Subsidiaries. Neither treasury shares, nor shares held by another corporation if a majority of the shares entitled to vote for the election of directors of such other corporation is held by this corporation, shall be voted at any meeting or counted in determining the total number of outstanding shares entitled to vote, but shares of its own issue held by its corporation in a fiduciary capacity, or held by such other corporation in a fiduciary capacity, may be voted and shall be counted in determining the total number of outstanding shares entitled to vote.

(e) Joint Holders. Shares of record in the names of two or more persons or shares to which two or more persons have the same fiduciary relationship, unless the Secretary of the corporation is given notice otherwise and furnished with a copy of the instrument creating the relationship, may be voted as follows: (i) if voted by an individual, his vote binds all holders; or (ii) if voted by more than one holder, the majority vote binds all, unless the vote is evenly split in which case the shares may be voted proportionately, or according to the ownership interest as shown in the instrument filed with the Secretary of the corporation.

2.13. Waiver of Notice by Stockholders. Whenever any notice is required to be given to any stockholder of the corporation under the certificate of incorporation or bylaws or any provision of the Delaware General Corporation Law, a waiver thereof in writing, signed at any time, whether before or after the time of meeting, by the stockholder entitled to such notice, shall be deemed equivalent to the giving of such notice. Attendance of a person at a meeting shall constitute a waiver of notice of such meeting, except where the person attends for the express purpose of objecting to the transaction of any business. Neither the business nor the purpose of any regular or special meeting of stockholders, directors or members of a committee of directors need be specified in the waiver.

2.14. Stockholders Consent Without Meeting. Any action required or permitted by the certificate of incorporation or bylaws or any provision of law to be taken at a meeting of the stockholders, may be taken without a meeting, prior notice or vote, if a consent in writing, setting forth the action so taken, shall be signed by the number of stockholders required to authorize such action at a meeting. If the action is authorized by less than unanimous consent, notice of the action shall be given to nonconsenting stockholders.

ARTICLE III.

BOARD OF DIRECTORS

3.1. General Powers and Number. The business and affairs of the corporation shall be managed by its Board of Directors. The number of directors of the corporation shall be one (1) or such other specific number as may be designated from time to time by resolution of the Board of Directors.

3.2. Tenure and Qualifications. Each director shall hold office until the next annual meeting of stockholders and until his successor shall have been qualified and elected, or until his prior death, resignation or removal. A director may be removed from office by affirmative vote of a majority of the outstanding shares entitled to vote for the election of such director, taken at a meeting of stockholders called for that purpose. A director may resign at any time by filing his written resignation with the Secretary of the corporation. Directors need not be residents of the State of Delaware or stockholders of the corporation.

3.3. Regular Meetings. A regular meeting of the Board of Directors shall be held without other notice than this by-law immediately after the annual meeting of stockholders, and each adjourned session thereof. The place of such regular meeting shall be the same as the place of the meeting of stockholders which precedes it, or such other suitable place as may be announced at such meeting of stockholders. The Board of Directors may provide, by resolution, the time and place, either within or without the State of Delaware, for the holding of additional regular meetings without other notice than such resolution.

3.4. Special Meetings. Special meetings of the Board of Directors may be called

by or at the request of the President, Secretary or Treasurer. The President or Secretary calling any special meeting of the Board of Directors may fix any place, either within or without the State of Delaware, as the place for holding any special meeting of the Board of Directors called by them, and if no other place is fixed the place of the meeting shall be the registered office of the corporation in the State of Delaware.

3.5. Notice; Waiver. Notice of each meeting of the Board of Directors (unless otherwise provided in or pursuant to Section 3.3) shall be given to each director not less than twenty-four (24) hours prior to the meeting by giving oral, telephone or written notice to a director in person, or by telegram, or not less than three (3) days prior to a meeting by delivering or mailing notice to the business address or such other address as a director shall have designated in writing and filed with the Secretary. If mailed, such notice shall be deemed to be delivered when deposited in the United States mail so addressed, with postage thereon prepaid. If notice be given by telegram, such notice shall be deemed to be delivered when the telegram is delivered to the telegraph company. Whenever any notice is required to be given to any director of the corporation under the certificate of incorporation or bylaws or any provision of law, a waiver thereof in writing, signed at any time, whether before or after the time of meeting, by the director entitled to such notice, shall be deemed equivalent to the giving of such notice. The attendance of a director at a meeting shall constitute a waiver of notice of such meeting, except where a director attends a meeting and objects thereto to the transaction of any business because the meeting is not lawfully called or convened. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the Board of Directors need be specified in the notice or waiver of notice of such meeting.

3.6. Quorum. Except as otherwise provided by law or by the certificate of incorporation or these bylaws, a majority of the directors shall constitute a quorum for the transaction of business at any meeting of the Board of Directors, but in no event shall less than one-third of the directors constitute a quorum. A majority of the directors present (though less than such quorum) may adjourn the meeting from time to time without further notice.

3.7. Manner of Acting. The act of the majority of the directors present at a meeting at which a quorum is present shall be the act of the Board of Directors, unless the act of a greater number is required by law or by the certificate of incorporation or these bylaws.

3.8. Conduct of Meetings. The President, or, in his absence a Vice President in the order provided under Section 4.6, or, in their absence, any director chosen by the directors present, shall call meetings of the Board of Directors to order and shall act as chairman of the meeting. The Secretary of the corporation shall act as secretary of all meetings of the Board of Directors but in the absence of the Secretary, the presiding officer may appoint any Assistant Secretary or any director or other person present to act as secretary of the meeting.

3.9. Vacancies. Any vacancy occurring in the Board of Directors, including a vacancy created by an increase in the number of directors, may be filled until the next succeeding annual election by the affirmative vote of a majority of the directors then in office, though less than a quorum of the Board of Directors; provided, that in case of a vacancy created by the removal of a director by vote of the stockholders, the stockholders shall have the right to fill such vacancy at the same meeting or any adjournment thereof.

3.10. Compensation. The Board of Directors, by affirmative vote of a majority of the directors then in office, and irrespective of any personal interest of any of its members, may establish reasonable compensation of all directors for services to the corporation as directors, officers or otherwise, or may delegate such authority to an appropriate committee. The Board of Directors also

shall have authority to provide for or delegate authority to an appropriate committee to provide for reasonable pensions, disability or death benefits, and other benefits or payments, to directors, officers and employees and to their estates, families, dependents or beneficiaries on account of prior services rendered by such directors, officers and employees to the corporation.

3.11. Presumption of Assent. A director of the corporation who is present at a meeting of the Board of Directors or a committee thereof of which he is a member at which action on any corporate matter is taken unless his dissent shall be entered in the minutes of the meeting or unless he shall file his written dissent to such action with the person acting as the secretary of the meeting before the adjournment thereof or shall forward such dissent by registered mail to the Secretary of the corporation immediately after the adjournment of the meeting. Such right to dissent shall not apply to a director who voted in favor of such action.

3.12. Committees. The Board of Directors by resolution adopted by the affirmative vote of a majority of the directors may designate one or more committees, each committee to consist of one or more directors elected by the Board of Directors, which to the extent provided in said resolution as initially adopted, and as thereafter supplemented or amended by further resolution adopted by a like vote, shall have and may exercise the powers of the Board of Directors in the management of the business and affairs of the corporation and may authorize the seal of the corporation to be affixed to all papers which may require it. Each such committee shall fix its own rules governing the conduct of its activities and shall make such reports to the Board of Directors of its activities as the Board of Directors may request.

3.13. Unanimous Consent Without Meeting. Any action required or permitted by the certificate of incorporation or bylaws or any provision of law to be taken by the Board of Directors at a meeting or by a resolution of any committee thereof may be taken without a meeting if a consent in writing, setting forth the action so taken, filed with the minutes of the proceedings, shall be signed by all of the directors then in office.

3.14. Telephonic Meetings. Members of the Board of Directors, or any committee designated by the Board, may participate in a meeting of such Board or committee by means of conference telephone or similar communications equipment by means of which all persons participating in the meeting can hear each other, and participation in a meeting pursuant to this by-law shall constitute presence in person at such meeting.

ARTICLE IV.

OFFICERS

4.1. Number. The principal officers of the corporation shall be a President, or any number of Vice Presidents, and a Secretary, each of whom shall be elected by the Board of Directors. Such other officers and assistant officers as may be deemed necessary may be elected or appointed by the Board of Directors. Any number of offices may be held by the same person.

4.2. Election and Term of Office. The officers of the corporation to be elected by the Board of Directors shall be elected annually by the Board of Directors at the first meeting of the Board of Directors held after each annual meeting of the stockholders. If the election of officers shall not be held at such meeting, such election shall be held as soon thereafter as conveniently may be. Each officer shall hold office until his successor shall have been duly elected or until his prior death, resignation or removal. Any officer may resign at any time upon written notice to the corporation. Failure to elect officers shall not dissolve or otherwise affect the corporation.

4.3. Removal. Any officer or agent may be removed by the Board of Directors whenever in its judgment the best interests of the corporation will be served thereby, but such removal shall be without prejudice to the contract rights, if any, of the person so removed. Election or appointment shall not of itself create contract rights.

4.4. Vacancies. A vacancy in any principal office because of death, resignation, removal, disqualification or otherwise, shall be filled by the Board of Directors for the unexpired portion of the term.

4.5. President. The President shall be the principal executive officer of the corporation and, subject to the control of the Board of Directors, shall, in general, supervise and control all of the business and affairs of the corporations. He shall, when present, preside at all meetings of the stockholders and of the Board of Directors. He shall have authority, subject to such rules as may be prescribed by the Board of Directors, to appoint such agents and employees of the corporation as he shall deem necessary, to prescribe their powers, duties and compensation, and to delegate authority to them. Such agents and employees shall hold office at the discretion of the President. He shall have authority to sign, execute and acknowledge, on behalf of the corporation, all deeds, mortgages, bonds, stock certificates, contracts, leases, reports and all other documents or instruments, of every conceivable kind and character whatsoever, necessary or proper to be executed in the course of the corporation's regular business, or which shall be authorized by resolution of the Board of Directors; and, except as otherwise provided by law or the Board of Directors, he may authorize any Vice President or other officer or agent of the corporation to sign, execute and acknowledge such documents or instruments in his place and stead. In general he shall perform all duties incident to the office of President and such other duties as may be prescribed by the Board of Directors from time to time.

4.6. The Vice President. In the absence of the President or in the event of his death, inability or refusal to act, or in the event for any reason it shall be impracticable for the President to act personally, the Vice President, if one is elected, (or in the event there be more than one Vice President, the Vice Presidents in the order designated by the Board of Directors, or in the absence of any designation, then in the order of their election) shall perform the duties of the President, and when so acting, shall have all the powers of and be subject to all the restrictions upon the President. Any Vice President may sign, with the Secretary or Assistant Secretary, certificates for shares of the corporation; and shall perform such other duties and have such authority as from time to time may be delegated or assigned to him by the President or by the Board of Directors. The execution of any instrument of the corporation by any Vice President shall be conclusive evidence, as to third parties, of his authority to act in the stead of the President.

4.7. The Secretary. The Secretary shall: (a) keep the minutes of the meetings of the stockholders and of the Board of Directors in one or more books provided for the purpose; (b) attest instruments to be filed with the Secretary of State; (c) see that all notices are duly given in accordance with the provisions of these bylaws or as required by law; (d) be custodian of the corporate records and of the seal of the corporation and see that the seal of the corporation is affixed to all documents the execution of which on behalf of the corporation under its seal is duly authorized; (e) keep or arrange for the keeping of a register of the post office address of each stockholder which shall be furnished to the Secretary by such stockholder; (f) sign with the President, or a Vice President, certificates for shares of the corporation, the issuance of which shall have been authorized by resolution of the Board of Directors; (g) have general charge of the stock transfer books of the corporation; and (h) in general perform all duties incident to the office of Secretary and have such other duties and exercise such authority as from time to time may be delegated or assigned to him by the President or by the Board of Directors.

4.8. The Treasurer. The Treasurer shall: (a) have charge and custody of and be responsible for all funds and securities of the corporation; (b) receive and give receipts for moneys due and payable to the corporation from any source whatsoever, and deposit all such moneys in the name of the corporation in such banks, trust companies or other depositaries as shall be selected in accordance with the provisions of Section 5.3; and (c) in general perform all of the duties incident to the office of Treasurer and have such other duties and exercise such other authority as from time to time may be delegated or assigned to him by the President or by the Board of Directors. If required by the Board of Directors, the Treasurer shall give a bond for the faithful discharge of his duties in such sum and with such surety or sureties as the Board of Directors shall determine.

4.9. Assistant Secretaries and Assistant Treasurers. There shall be such number of Assistant Secretaries and Assistant Treasurers as the Board of Directors may from time to time authorize, if any. The Assistant Secretaries may sign with the President or a Vice President certificates for shares of the corporation the issuance of which shall have been authorized by a resolution of the Board of Directors. The Assistant Treasurers shall respectively, if required by the Board of Directors, give bonds for the faithful discharge of the duties in such sums and with such sureties as the Board of Directors shall determine. the Assistant Secretaries and Assistant Treasurers, in general, shall perform such duties and have such authority as shall from time to time be delegated or assigned to them by the Secretary or the Treasurer, respectively, or by the President or the Board of Directors.

4.10. Other Assistants and Acting Officers. The Board of Directors shall have the power to appoint any person to act as assistant to any officer, or as agent for the corporation in his stead, or to perform the duties of such officer whenever for any reason it is impracticable for such officer to act personally, and such assistant or acting officer or other agent so appointed by the Board of Directors shall have the power to perform all the duties of the office to which he is so appointed to be an assistant, or as to which he is so appointed to act, except as such power may be otherwise defined or restricted by the Board of Directors.

4.11. Salaries. The salaries of the principal officers shall be fixed from time to time by the Board of Directors or by a duly authorized committee thereof, and no officer shall be prevented from receiving such salary by reason of the fact that he is also a director of the corporation.

ARTICLE V.

CONTRACTS, LOAN, CHECKS AND DEPOSITS;

SPECIAL CORPORATE ACTS

5.1. Contracts. The Board of Directors may authorize any officer or officers, agent or agents, to enter into any contract or execute or deliver any instrument in the name of an on behalf of the corporation, and such authorization may be general or confined to specific instances. In the absence of other designation, all deeds, mortgages and instruments of assignment or pledge made by the corporation shall be executed in the name of the corporation by the President or a Vice President and by the Secretary, an Assistant Secretary, the Treasurer or an Assistant Treasurer; the Secretary or an Assistant Secretary, when necessary or required, shall affix the corporate seal thereto; and when so executed no other party to such instrument or any third party shall be required to make any inquiry into the authority of the signing officer or officers.

5.2. Loans. No indebtedness for borrowed money shall be contracted on behalf of

the corporation and no evidences of such indebtedness shall be issued in its name unless authorized by or under the authority of a resolution of the Board of Directors. Such authorization may be general or confined to specific instances.

5.3. Deposits. All funds of the corporation not otherwise employed shall be deposited from time to time to the credit of the corporation in such banks, trust companies or other depositaries as may be selected by or under the authority of a resolution of the Board of Directors.

5.4. Voting of Securities Owned by this Corporation. Subject always to the specific directions of the Board of Directors, (a) any shares or other securities issued by any other corporation and owned or controlled by this corporation may be voted at any meeting of security holders of such other corporation by the President of this corporation if he is present, or in his absence, by a Vice President of this corporation who may be present, and (b) whenever, in the judgment of the President, or in his absence, of a Vice President, it is desirable for this corporation to execute a proxy or written consent in respect to any shares or other securities issued by any other corporation and owned by this corporation, such proxy or consent shall be executed in the name of this corporation by the President or one of the Vice Presidents of this corporation, without necessity of any authorization by the Board of Directors affixation of corporate seal or countersignature or attestation by another officer. Any person or persons designated in the manner above stated as the proxy or proxies of this corporation shall have full right, power and authority to vote the shares or other securities issued by such other corporation and owned by its corporation the same as such shares or other securities might be voted by this corporation.

ARTICLE VI.

CERTIFICATES FOR SHARES AND THEIR TRANSFER

6.1. Certificates for Shares. Certificates representing shares of the corporation shall be in such form, consistent with law, as shall be determined by the Board of Directors. Such certificates shall be signed by the President or a Vice President and by the Secretary or an Assistant Secretary or Treasurer or Assistant Treasurer. All certificates for shares shall be consecutively numbered or otherwise identified. The name and address of the person to whom the shares represented thereby are issued, with the number of shares and date of issue, shall be entered on the stock transfer books of the corporation. All certificates surrendered to the corporation for transfer shall be canceled and no new certificate shall be issued until the former certificate for a like number of shares shall have been surrendered and canceled, except as provided in Section 6.6.

6.2. Facsimile Signatures and Seal. The seal of the corporation on any certificates for shares may be a facsimile. The signature of the President or Vice President and the Secretary or Assistant Secretary upon a certificate may be facsimiles if the certificate is manually signed on behalf of a transfer agent, or a registrar, other than the corporation itself or an employee of the corporation.

6.3. Signature by Former Officers. In case any officer, who has signed or whose facsimile signature has been placed upon any certificate for shares, shall have ceased to be such officer before such certificate is issued, it may be issued by the corporation with the same effect as if he were such officer at the date of its issue.

6.4. Transfer of Shares. Prior to due presentment of a certificate for shares for registration of transfer, the corporation may treat the registered owner of such shares as the person exclusively entitled to vote, to receive notifications and otherwise to have and exercise all the rights

and power of an owner. Where a certificate for shares is presented to the corporation with a request to register for transfer, the corporation shall not be liable to the owner or any other person suffering loss as a result of such registration of transfer if (a) there were on or with the certificate the necessary endorsements, and (b) the corporation had no duty to inquire into adverse claims or has discharged by such duty. The corporation may require reasonable assurance that said endorsements are genuine and effective and compliance with such other regulations as may be prescribed by or under the authority of the Board of Directors. Where a transfer of shares is made for collateral security, and not absolutely, it shall be so expressed in the entry of transfer if, when the shares are presented, both the transferor and the transferee so request.

6.5. Restrictions on Transfer. The face or reverse side of each certificate representing shares shall bear a conspicuous notation of any restriction imposed by the corporation upon the transfer of such shares. Otherwise the restriction is invalid except against those with actual knowledge of the restrictions.

6.6. Lost, Destroyed or Stolen Certificates. The Board of Directors may direct a new certificate or certificates to be issued in place of any certificate or certificates theretofore issued by the corporation alleged to have been lost, stolen or destroyed, upon the making of an affidavit of that fact by the person claiming the certificate of stock to be lost, stolen or destroyed. When authorizing such issue of a new certificate or certificates, the Board of Directors may, in its discretion and as a condition precedent to the issuance thereof, require the person requesting such new certificate or certificates, or his or her legal representative, to give the corporation a bond in such sum as it may direct as indemnity against any claim that may be made against the corporation with respect to the certificate alleged to have been lost, stolen or destroyed.

6.7. Consideration for Shares. The shares of the corporation may be issued for such consideration as shall be fixed from time to time by the Board of Directors, consistent with the laws of the State of Delaware.

6.8. Stock Regulations. The Board of Directors shall have the power and authority to make all such further rules and regulations not inconsistent with the statutes of the State of Delaware as it may deem expedient concerning the issue, transfer and registration of certificates representing shares of the corporation.

ARTICLE VII.

SEAL

7.1. The Board of Directors may, at their discretion, provide a corporate seal in an appropriate form.

ARTICLE VIII.

FISCAL YEAR

8.1. The fiscal year of the corporation shall begin on the first day of January and end on the last day of December in each year.

ARTICLE IX.

AMENDMENTS

9.1. By Stockholders. These bylaws may be adopted, amended or repealed and new bylaws may be adopted by the stockholders entitled to vote at the stockholders' annual meeting without prior notice or any other meeting provided the amendment under consideration has been set forth in the notice of meeting, by affirmative vote of net less than a majority of the shares present or represented at any meeting at which a quorum is in attendance.

9.2. By Directors. These bylaws may be adopted, amended or repealed by the Board of Directors as provided in the certificate of incorporation by the affirmative vote of a majority of the number of directors present at any meeting at which a quorum is in attendance; but no by-law adopted by the stockholders shall be amended or repealed by the Board of Directors if the bylaws so provide.

9.3. Implied Amendments. Any action taken or authorized by the Board of Directors, which would be inconsistent with the bylaws then in effect but it taken or authorized by affirmative vote of not less than the number of directors required to amend the bylaws so that the bylaws would be consistent with such action, shall be given the same effect as though the bylaws had been temporarily amended or suspended so far, but only so far, as is necessary to permit the specific action so taken or authorized.

ARTICLE X.

INDEMNIFICATION OF DIRECTORS AND OFFICERS

10.1. Indemnification of Directors, Officers and Employees. The Corporation shall indemnify to the full extent permitted by law any person made or threatened to be made a party to an action or proceeding, whether criminal, civil, administrative or investigative, by reason of the fact that the person, his or her testator or intestate is or was a director, officer or employee of the Corporation or any predecessor of the Corporation or serves or served any other enterprise as a director, officer or employee at the request of the Corporation or any predecessor of the Corporation.

Delaware

The First State

Page 1

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE RESTATED CERTIFICATE OF "BATS TRADING, INC.", CHANGING ITS NAME FROM "BATS TRADING, INC." TO "CBOE TRADING, INC.", FILED IN THIS OFFICE ON THE SIXTEENTH DAY OF OCTOBER, A.D. 2017, AT 9:57 O`CLOCK P.M.

A FILED COPY OF THIS CERTIFICATE HAS BEEN FORWARDED TO THE NEW CASTLE COUNTY RECORDER OF DEEDS.

A handwritten signature of Jeffrey W. Bullock in black ink, written over a horizontal line. Below the line, the text "Jeffrey W. Bullock, Secretary of State" is printed.

Jeffrey W. Bullock, Secretary of State

3986650 8100
SR# 20176643032

You may verify this certificate online at corp.delaware.gov/authver.shtml

Authentication: 203408772
Date: 10-17-17

AMENDED AND RESTATED

**CERTIFICATE OF
INCORPORATION OF
BATS TRADING, INC.**

The corporation filed its original Certificate of Incorporation with the Secretary of State of the State of Delaware on June 16, 2005. This Amended and Restated Certificate of Incorporation of the corporation, which restates and integrates and also further amends the provisions of the corporation's Certificate of Incorporation (as amended pursuant to those certain certificates of amendment filed with the Secretary of State of the State of Delaware on October 18, 2005, October 20, 2005, June 13, 2006 and November 10, 2009) was duly adopted in accordance with the provisions of Sections 242 and 245 of the General Corporation Law of the State of Delaware and by the written consent of its sole stockholder in accordance with Section 228 of the General Corporation Law of the State of Delaware. The Certificate of Incorporation of the corporation is hereby amended, integrated and restated to read in its entirety as follows:

FIRST: The name of the corporation is Cboe Trading, Inc.

SECOND: Its registered office in the State of Delaware is to be located at 1209 Orange Street, in the City of Wilmington, County of New Castle, Zip Code 19801. The registered agent in charge thereof is The Corporation Trust Company.

THIRD: The purpose of the corporation is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law of Delaware.

FOURTH: The total number of shares of stock which the corporation shall have authority to issue is One Thousand (1,000) and each such share is \$0.01 par value.

[Signature page follows]

IN WITNESS WHEREOF, Bats Trading, Inc. has caused this certificate to be signed as of this 17th day of October, 2017.

BATS TRADING, INC.

By: 

Name: Troy Yeazel

Its: President

G Omicron Acquisition Corp.

H Cboe FX Holdings, LLC

Delaware

The First State

Page 1

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF
DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT
COPY OF THE RESTATED CERTIFICATE OF "BATS HOTSPOT HOLDINGS
LLC", CHANGING ITS NAME FROM "BATS HOTSPOT HOLDINGS LLC" TO
"CBOE FX HOLDINGS, LLC", FILED IN THIS OFFICE ON THE
SEVENTEENTH DAY OF OCTOBER, A.D. 2017, AT 12:22 O`CLOCK P.M.



3229145 8100
SR# 20176652042

You may verify this certificate online at corp.delaware.gov/authver.shtml

A handwritten signature in black ink, appearing to read "JWB", is written over a horizontal line. Below the line, the text "Jeffrey W. Bullock, Secretary of State" is printed.

Jeffrey W. Bullock, Secretary of State

Authentication: 203410772
Date: 10-17-17

AMENDED AND RESTATED
CERTIFICATE OF FORMATION
OF
BATS HOTSPOT HOLDINGS LLC

The limited liability company filed its original Certificate of Formation with the Secretary of State of the State of Delaware on March 11, 2015 under the name Hotspot FX Holdings, LLC. This Amended and Restated Certificate of Formation of the LLC, which restates and integrates and also further amends the provisions of the limited liability company's Certificate of Formation (as amended pursuant to those certain certificates of amendment filed with the Secretary of State of the State of Delaware on March 13, 2015 and February 19, 2016), has been duly executed and is being filed in accordance with the Delaware Limited Liability Company Act (6 Del. C. § 18-208). The Certificate of Formation of the limited liability company is hereby amended, integrated and restated in its entirety to read as follows:

FIRST: The name of the limited liability company is Cboe FX Holdings, LLC.

SECOND: The address of the LLC's registered office in the State of Delaware is The Corporation Trust Company, 1209 Orange Street, Wilmington, DE 19801, and its registered agent at such address is The Corporation Trust Company.

[Signature page follows]

IN WITNESS WHEREOF, the undersigned has caused this Amended and Restated Certificate of Formation of Bats Hotspot Holdings LLC to be executed as of this 17th day of October, 2017.

BATS HOTSPOT HOLDINGS LLC

By: 

Name: Edward T. Tilly

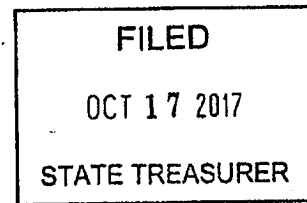
Title: Chief Executive Officer

I Cboe FX Markets, LLC

Oct 17 2017 12:54PM CT Corp 6095381130

page 2

RNC



AMENDED AND RESTATED
CERTIFICATE OF FORMATION
OF
BATS HOTSPOT LLC

0600120601

The limited liability company filed its original Certificate of Formation with the Department of the Treasury of the State of New Jersey on August 7, 2001 under the name Hotspot FX 2, L.L.C., and subsequently amended its certificate of formation (i) on November 26, 2001, to change its name to Hotspot FXi, L.L.C., (ii) on May 5, 2006, to change its registered agent, (iii) on September 25, 2009, to change its name to Hotspot FX LLC, (iv) on October 22, 2012, to change its name to Knight Hotspot FX LLC, (v) on July 2, 2013 to change its name to KCG Hotspot FX LLC and (vi) on February 19, 2016, to change its name to BATS Hotspot LLC. This Amended and Restated Certificate of Formation of the limited liability company, which restates and integrates and also further amends the provisions of the limited liability company's Certificate of Formation (as amended pursuant to those certain certificates of amendment referenced above), has been duly executed and is being filed in accordance with the Revised Uniform Limited Liability Company Act of the State of New Jersey (NJ Rev Stat § 42:2C-1 et. seq.). The Certificate of Formation of the limited liability company is hereby amended, integrated and restated in its entirety to read as follows:

1. The name of the company is Cboe FX Markets, LLC (the "Company").
2. The address of the registered office of the Company in the State of New Jersey is 820 Bear Tavern Road, West Trenton, NJ 08628.
3. The name and address of the registered agent for service of process on the Company in the State of New Jersey is The Corporation Trust Company, 820 Bear Tavern Road, West Trenton, NJ 08628.
4. The Company is to have perpetual existence.

[Signature page follows]

2919683
5150649

IN WITNESS WHEREOF, the undersigned has caused this Amended and Restated Certificate of Formation of Bats Hotspot LLC to be executed as of this 17th day of October, 2017.

BATS HOTSPOT LLC

By: 

Name: Edward T. Tilly

Title: Chief Executive Officer

J Cboe FX Services LLC

RNC

FILED

OCT 17 2017

STATE TREASURER

AMENDED AND RESTATED
CERTIFICATE OF FORMATION
OF

0600219344

BATS HOTSPOT SERVICES LLC

The limited liability company filed its original Certificate of Formation with the Department of the Treasury of the State of New Jersey on November 22, 2004 under the name Hotspot FXr, L.L.C., and subsequently amended its certificate of formation (i) on May 5, 2006, to change its registered agent and (ii) on February 19, 2016, to change its name to Bats Hotspot Services LLC. This Amended and Restated Certificate of Formation of the limited liability company, which restates and integrates and also further amends the provisions of the limited liability company's Certificate of Formation (as amended pursuant to those certain certificates of amendment referenced above), has been duly executed and is being filed in accordance with the Revised Uniform Limited Liability Company Act of the State of New Jersey (NJ Rev Stat § 42:2C-1 et. seq.). The Certificate of Formation of the limited liability company is hereby amended, integrated and restated in its entirety to read as follows:

1. The name of the company is Cboe FX Services, LLC (the "Company").
2. The address of the registered office of the Company in the State of New Jersey is 820 Bear Tavern Road, West Trenton, NJ 08628.
3. The name and address of the registered agent for service of process on the Company in the State of New Jersey is The Corporation Trust Company, 820 Bear Tavern Road, West Trenton, NJ 08628.
4. The Company is to have perpetual existence.

[Signature page follows]

2919683
5150651

Oct 17 2017 12:55PM CT Corp 6095381130

page 3

IN WITNESS WHEREOF, the undersigned has caused this Amended and Restated Certificate of Formation of Bats Hotspot Services LLC to be executed as of this 17th day of October, 2017.

BATS HOTSPOT SERVICES LLCBy: 

Name: Edward T. Tilly

Title: Chief Executive Officer

K Bats International Holdings Limited

L Cboe FX Europe Limited



**CERTIFICATE OF INCORPORATION
ON CHANGE OF NAME**

Company Number 9424751

The Registrar of Companies for England and Wales hereby certifies that under the Companies Act 2006:

BATS HOTSPOT EUROPE LIMITED

a company incorporated as private limited by shares, having its registered office situated in England and Wales, has changed its name to:

CBOE FX EUROPE LIMITED

Given at Companies House on **17th October 2017**.

The above information was communicated by electronic means and authenticated by the Registrar of Companies under section 1115 of the Companies Act 2006



Companies House



**THE OFFICIAL SEAL OF THE
REGISTRAR OF COMPANIES**

M Bats Hotspot Asia Pte. Ltd.

N Bats Trading Limited

O Chi-X Europe Limited

P Cboe ETF.com, Inc.

Delaware

The First State

Page 1

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE RESTATED CERTIFICATE OF "BATS ETF.COM, INC.", CHANGING ITS NAME FROM "BATS ETF.COM, INC." TO "CBOE ETF.COM, INC.", FILED IN THIS OFFICE ON THE SEVENTEENTH DAY OF OCTOBER, A.D. 2017, AT 12:18 O`CLOCK P.M.

A FILED COPY OF THIS CERTIFICATE HAS BEEN FORWARDED TO THE NEW CASTLE COUNTY RECORDER OF DEEDS.




Jeffrey W. Bullock, Secretary of State

6001013 8100
SR# 20176652041

You may verify this certificate online at corp.delaware.gov/authver.shtml

Authentication: 203410744
Date: 10-17-17

AMENDED AND RESTATED

**CERTIFICATE OF
INCORPORATION OF
BATS ETF.COM, INC.**

The corporation filed its original Certificate of Incorporation with the Secretary of State of the State of Delaware on March 28, 2016. This Amended and Restated Certificate of Incorporation of the corporation, which restates and integrates and also further amends the provisions of the corporation's Certificate of Incorporation, was duly adopted in accordance with the provisions of Sections 242 and 245 of the General Corporation Law of the State of Delaware and by the written consent of its sole stockholder in accordance with Section 228 of the General Corporation Law of the State of Delaware. The Certificate of Incorporation of the corporation is hereby amended, integrated and restated to read in its entirety as follows:

FIRST: The name of the corporation is Cboe ETF.com, Inc. (the "Corporation").

SECOND: The address of the registered office of the Corporation in the State of Delaware is Corporation Trust Center, 1209 Orange Street, City of Wilmington, County of New Castle, Delaware 19801. The name of the registered agent of the Corporation at such address is The Corporation Trust Company.

THIRD: The nature of the business or purposes to be conducted or promoted by the Corporation is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law of the State of Delaware ("Delaware Law") as the same exists or may hereafter be amended.

FOURTH: The total number of shares of stock which the Corporation shall have authority to issue is 1,000, and the par value of each such share is \$0.01, amounting in the aggregate to \$10.00.

FIFTH: The Board of Directors shall have the power to adopt, amend or repeal the bylaws of the Corporation.

SIXTH: Election of directors need not be by written ballot unless the bylaws of the Corporation so provide.

SEVENTH: The Corporation expressly elects not to be governed by Section 203 of Delaware Law.

EIGHTH: (1) A director of the Corporation shall not be liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director to the fullest extent permitted under Delaware Law.

(2)(a) Each person (and the heirs, executors or administrators of such person) who was or is a party or is threatened to be made a party to, or is involved in any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative, by reason of the fact that such person is or was a director or officer of the Corporation or is or was serving at the request of the Corporation as a director or officer of another corporation, partnership, joint venture, trust or other enterprise, shall be indemnified and held harmless by the Corporation to the fullest extent permitted by Delaware Law. The right to indemnification conferred in this ARTICLE EIGHTH shall also include the right to be paid by the Corporation the expenses incurred in connection with any such proceeding in advance of its final disposition to the fullest extent authorized by Delaware Law. The right to indemnification conferred in this ARTICLE EIGHTH shall be a contract right.

(b) The Corporation may, by action of its Board of Directors, provide indemnification to such of the employees and agents of the Corporation to such extent and to such effect as the Board of Directors shall determine to be appropriate and authorized by Delaware Law.

(3) The Corporation shall have the power to purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the Corporation, or is or was serving at the request of the Corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against any expense, liability or loss incurred by such person in any such capacity or arising out of such person's status as such, whether or not the Corporation would have the power to indemnify such person against such liability under Delaware Law.

(4) The rights and authority conferred in this ARTICLE EIGHTH shall not be exclusive of any other right which any person may otherwise have or hereafter acquire.

(5) Neither the amendment nor repeal of this ARTICLE EIGHTH, nor the adoption of any provision of this Certificate of Incorporation or the bylaws of the Corporation, nor, to the fullest extent permitted by Delaware Law, any modification of law, shall adversely affect any right or protection of any person granted pursuant hereto existing at, or arising out of or related to any event, act or omission that occurred prior to, the time of such amendment, repeal, adoption or modification (regardless of when any proceeding (or part thereof) relating to such event, act or omission arises or is first threatened, commenced or completed).

NINTH: The Corporation reserves the right to amend this Certificate of Incorporation in any manner permitted under Delaware Law and all rights and powers conferred herein on stockholders, directors and officers, if any, are subject to this reserved power.

[Signature page follows]

IN WITNESS WHEREOF, Bats ETF.com, Inc. has caused this certificate to be signed as of this 17th day of October, 2017.

BATS ETF.COM, INC.

By: 

Name: Chris Concannon

Its: President and Chief Operating Officer

Q INDEXPUBS S.A.

R Bats Hotspot IB LLC

S Bats Hotspot SEF LLC

T Bats Worldwide Holdings Limited

U Cboe Global Markets, Inc.

Delaware

The First State

Page 1

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE RESTATED CERTIFICATE OF "CBOE HOLDINGS, INC.", CHANGING ITS NAME FROM "CBOE HOLDINGS, INC." TO "CBOE GLOBAL MARKETS, INC.", FILED IN THIS OFFICE ON THE SIXTEENTH DAY OF OCTOBER, A.D. 2017, AT 5:53 O'CLOCK P.M.

A FILED COPY OF THIS CERTIFICATE HAS BEEN FORWARDED TO THE NEW CASTLE COUNTY RECORDER OF DEEDS.



4205301 8100
SR# 20176641280

You may verify this certificate online at corp.delaware.gov/authver.shtml

A handwritten signature in black ink, appearing to read "JBullock", is written over a horizontal line. Below the line, the text "Jeffrey W. Bullock, Secretary of State" is printed.

Jeffrey W. Bullock, Secretary of State

Authentication: 203406057
Date: 10-16-17

**THIRD AMENDED AND RESTATED
CERTIFICATE OF INCORPORATION**

**OF
CBOE HOLDINGS, INC.**

State of Delaware
Secretary of State
Division of Corporations
Delivered 05:53 PM 10/16/2017
FILED 05:53 PM 10/16/2017
SR 20176641280 - FileNumber 4205301

CBOE Holdings, Inc., a corporation organized under the laws of the State of Delaware (the "Corporation"), hereby certifies as follows:

1. The Corporation was incorporated on August 15, 2006.
2. This Third Amended and Restated Certificate of Incorporation has been duly adopted by the Board of Directors of the Corporation in accordance with Section 242(b)(1) and Section 245 of the General Corporation Law of the State of Delaware (the "GCL"). This Third Amended and Restated Certificate of Incorporation only restates and integrates and does not further amend (except as permitted under Section 242(a)(1) of the GCL in order to change the name of the Corporation) the provisions of the Second Amended and Restated Certificate of Incorporation of the Corporation.
3. The text of the Third Amended and Restated Certificate of Incorporation as amended, integrated and restated shall read in full as follows:

FIRST: The name of the corporation is Cboe Global Markets, Inc.

SECOND: The address of the registered office of the Corporation in the State of Delaware is Corporation Trust Center, 1209 Orange Street, in the City of Wilmington, County of New Castle, Delaware 19801. The name of the Corporation's registered agent at such address shall be The Corporation Trust Company.

THIRD: The nature of the business or purposes to be conducted or promoted by the Corporation is to engage in any lawful act or activity for which corporations may be organized under the GCL.

FOURTH: (a) *Authorized Stock*. The total number of shares of all classes of capital stock that the Corporation is authorized to issue is three hundred forty-five million (345,000,000) shares, of which:

(i) 325,000,000 shares shall be shares of Voting Common Stock, par value \$.01 per share (the "Common Stock"); and

(ii) 20,000,000 shares shall be shares of preferred stock, par value \$.01 per share (the "Preferred Stock").

(b) *Common Stock*. All shares of Common Stock shall have the same rights, powers and preferences.

(c) *Preferred Stock*. The Board of Directors of the Corporation (the "Board") is authorized, by resolution or resolutions, subject to any limitations prescribed by law, to provide for the issuance of shares of Preferred Stock in one or more series, and by filing a certificate of designations pursuant to the applicable law of the State of Delaware, to establish from time to time the number of shares to be included in each such series, and to fix the

designation, powers, preferences, and rights of the shares of each such series and any qualifications, limitations or restrictions thereof, including without limitation the following:

(i) the distinctive serial designation of such series that shall distinguish it from other series;

(ii) the number of shares of such series, which number the Board may thereafter (except where otherwise provided in the certificate of designations) increase or decrease (but not below the number of shares of such series then outstanding);

(iii) whether dividends shall be payable to the holders of the shares of such series and, if so, the basis on which such holders shall be entitled to receive dividends (which may include, without limitation, a right to receive such dividends or distributions as may be declared on the shares of such series by the Board, a right to receive such dividends or distributions, or any portion or multiple thereof, as may be declared on the Common Stock or any other class of stock or, in addition to or in lieu of any other right to receive dividends, a right to receive dividends at a particular rate or at a rate determined by a particular method, in which case such rate or method of determining such rate may be set forth), the form of such dividend, any conditions on which such dividends shall be payable and the date or dates, if any, on which such dividends shall be payable;

(iv) whether dividends on the shares of such series shall be cumulative and, if so, the date or dates or method of determining the date or dates from which dividends on the shares of such series shall be cumulative;

(v) the amount or amounts, if any, which shall be payable out of the assets of the Corporation to the holders of the shares of such series upon the voluntary or involuntary liquidation, dissolution or winding-up of the Corporation, and the relative rights of priority, if any, of payment of the shares of such series;

(vi) the price or prices (in cash, securities or other property or a combination thereof) at which, the period or periods within which and the terms and conditions upon which the shares of such series may be redeemed, in whole or in part, at the option of the Corporation or at the option of the holder or holders thereof or upon the happening of a specified event or events;

(vii) the obligation, if any, of the Corporation to purchase or redeem shares of such series pursuant to a sinking fund or otherwise and the price or prices (in cash, securities or other property or a combination thereof) at which, the period or periods within which and the terms and conditions upon which the shares of such series shall be redeemed or purchased, in whole or in part, pursuant to such obligation;

(viii) whether or not the shares of such series shall be convertible or exchangeable, at any time or times at the option of the holder or holders thereof or at the option of the Corporation or upon the happening of a specified event or events, into shares of any other class or classes or any other series of the same or any other class or classes of stock of the Corporation or any other securities or property of the Corporation or any other entity, and the price or prices (in cash, securities or other property or a combination thereof) or rate or rates of conversion or exchange and any adjustments applicable thereto;

(ix) whether or not the holders of the shares of such series shall have voting rights, in addition to the voting rights required by law, and if so the terms of such voting rights, which may provide, among other things and subject to the other provisions of this Certificate of

Incorporation, that each share of such series shall carry one vote or more or less than one vote per share, that the holders of such series shall be entitled to vote on certain matters as a separate class (which for such purpose may be comprised solely of such series or of such series and one or more other series or classes of stock of the Corporation); and

- (x) any other relative rights, powers, preferences and limitations of this series.

For all purposes, this Certificate of Incorporation shall include each certificate of designations (if any) setting forth the terms of a series of Preferred Stock. Subject to the rights, if any, of the holders of any series of Preferred Stock set forth in a certificate of designations, an amendment of this Certificate of Incorporation to increase or decrease the number of authorized shares of Preferred Stock (but not below the number of shares thereof then outstanding) may be adopted by resolution adopted by the Board and approved by the affirmative vote of the holders of a majority of the votes entitled to be cast by the holders of the then-outstanding shares of stock of the Corporation entitled to vote thereon, and no vote of the holders of any series of Preferred Stock, voting as a separate class, shall be required therefor, unless a vote of any such holders is required pursuant to the terms of any Preferred Stock designation.

Except as otherwise required by law, holders of Common Stock, as such, shall not be entitled to vote on any amendment of this Certificate of Incorporation that alters or changes the powers, preferences, rights or other terms of one or more outstanding series of Preferred Stock if the holders of any such series are entitled, either separately or together with the holders of one or more other series of Preferred Stock, to vote thereon pursuant to this Certificate of Incorporation or the certificate of designations relating to such series of Preferred Stock, or pursuant to the GCL as then in effect.

FIFTH: (a) *Definitions*. As used in this Certificate of Incorporation:

- (i) the term "*Act*" shall mean the Securities Exchange Act of 1934, as amended;
- (ii) the term "*beneficially owned*" shall have the meaning set forth in Rule 13d-3 and 13d-5 under the Act, as amended;
- (iii) the term "*CBOE*" shall mean the Chicago Board Options Exchange, Incorporated;
- (iv) the term "*Person*" shall mean an individual, partnership (general or limited), joint stock company, corporation, limited liability company, trust or unincorporated organization, or any governmental entity or agency or political subdivision thereof;
- (v) the term "*Regulated Securities Exchange Subsidiary*" shall mean any national securities exchange controlled, directly or indirectly, by the Corporation, including, but not limited to CBOE; and
- (vi) the term "*Related Persons*" shall mean (A) with respect to any Person, all "affiliates" (as such term is defined in Rule 12b-2 under the Act) of such Person; (B) any Person associated with a member (as the phrase "Person associated with a member" is defined under Section 3(a)(21) of the Act); (C) any two or more Persons that have any agreement, arrangement or understanding (whether or not in writing) to act together for the purpose of acquiring, voting, holding or disposing of shares of the capital stock of the Corporation; (D) in the case of a Person that is a company, corporation or similar entity, any executive officer (as defined under Rule 3b-7 of the Act) or director of such Person and, in the case of a Person that is a partnership or a limited liability company, any general partner, managing member or

manager of such Person, as applicable; (E) in the case of a Person that is a natural person, any relative or spouse of such natural person, or any relative of such spouse who has the same home as such natural person or who is a director or officer of the Corporation or any of the Corporation's parents or subsidiaries; (F) in the case of a Person that is an executive officer (as defined under Rule 3b-7 under the Act), or a director of a company, corporation or similar entity, such company, corporation or entity, as applicable; and (G) in the case of a Person that is a general partner, managing member or manager of a partnership or limited liability company, such partnership or limited liability, as applicable.

SIXTH: (a) *Voting Limitations*. Notwithstanding any other provision of this Certificate of Incorporation, (x) no Person, either alone or together with its Related Persons, as of any record date for the determination of stockholders entitled to vote on any matter, shall be entitled to vote or cause the voting of shares of stock of the Corporation, beneficially owned directly or indirectly by such Person or its Related Persons, in person or by proxy or through any voting agreement or other arrangement, to the extent that such shares represent in the aggregate more than 20% of the then outstanding votes entitled to be cast on such matter, without giving effect to this Article Sixth, and the Corporation shall disregard any such votes purported to be cast in excess of such limitation; and (y) if any Person, either alone or together with its Related Persons, is party to any agreement, plan or other arrangement relating to shares of stock of the Corporation entitled to vote on any matter with any other Person, either alone or together with its Related Persons, under circumstances that would result in shares of stock of the Corporation that would be subject to such agreement, plan or other arrangement not being voted on any matter, or the withholding of any proxy relating thereto, where the effect of such agreement, plan or other arrangement would be to enable any Person with the right to vote any shares of stock of the Corporation, but for this Article Sixth, either alone or together with its Related Persons, to vote, possess the right to vote or cause the voting of shares of stock of the Corporation that would exceed 20% of the then outstanding votes entitled to be cast on such matter (assuming that all shares of stock of the Corporation that are subject to such agreement, plan or arrangement are not outstanding votes entitled to be cast on such matter) (the "*Recalculated Voting Limitation*"), then the Person with such right to vote shares of stock of the Corporation, either alone or together with its Related Persons, shall not be entitled to vote or cause the voting of shares of stock of the Corporation beneficially owned by such Person, either alone or together with its Related Persons, in person or by proxy or through any voting agreement or other arrangement, to the extent that such shares represent in the aggregate more than the Recalculated Voting Limitation, and the Corporation shall disregard any such votes purported to be cast in excess of the Recalculated Voting Limitation.

(i) The limitations set forth in this Section (a), as applicable, shall apply to each Person unless and until:

(A) such Person shall have delivered to the Corporation, not less than 45 days (or such shorter period as the Board shall expressly consent to) prior to any vote, a notice in writing, of such Person's intention, either alone or together with its Related Persons, to vote or cause the voting of shares of stock of the Corporation beneficially owned by such Person or its Related Persons, in person or by proxy or through any voting agreement or other arrangement, in excess of the such limitations, as applicable;

(B) the Board shall have resolved to expressly permit such voting; and

(C) such resolution shall have been filed with, and approved by, the Securities and Exchange Commission ("SEC") under Section 19(b) of the Act, and shall have become effective thereunder.

(ii) Subject to its fiduciary obligations under applicable law, the Board shall not adopt any resolution pursuant to clause (B) of Section (a)(i) of this Article Sixth unless the Board shall have determined that:

(A) the exercise of such voting rights or the entering into of such agreement, plan or other arrangement, as applicable, by such Person, either alone or together with its Related Persons, will not impair the ability of either the Corporation or any Regulated Securities Exchange Subsidiary to discharge its respective responsibilities under the Act and the rules and regulations thereunder and is otherwise in the best interests of the Corporation, its stockholders and the Regulated Securities Exchange Subsidiaries;

(B) the exercise of such voting rights or the entering into of such agreement, plan or other arrangement, as applicable, by such Person, either alone or together with its Related Persons, will not impair the SEC's ability to enforce the Act;

(C) in the case of a resolution to approve the exercise of voting rights in excess of 20% of the then outstanding votes entitled to be cast on such matter, (x) neither such Person nor any of its Related Persons is subject to any statutory disqualification (as defined in Section 3(a)(39) of the Act) and (y) for so long as the Corporation directly or indirectly controls any Regulated Securities Exchange Subsidiary, neither such Person nor any of its Related Persons is a "Trading Permit Holder" (as defined in the Bylaws of any Regulated Securities Exchange Subsidiary as they may be amended from time to time) (any such Person that is a Related Person of such Trading Permit Holder shall hereinafter also be deemed to be a Trading Permit Holder for purposes of this Certificate of Incorporation, as the context may require); and

(D) in the case of a resolution to approve the entering into of an agreement, plan or other arrangement under circumstances that would result in shares of stock of the Corporation that would be subject to such agreement, plan or other arrangement not being voted on any matter, or the withholding of any proxy relating thereto, where the effect of such agreement, plan or other arrangement would be to enable any Person, but for this Article Sixth, either alone or together with its Related Persons, to vote, possess the right to vote or cause the voting of shares of stock of the Corporation that would exceed 20% of the then outstanding votes entitled to be cast on such matter (assuming that all shares of stock of the Corporation that are subject to such agreement, plan or other arrangement are not outstanding votes entitled to be cast on such matter), (x) neither such Person nor any of its Related Persons is subject to any statutory disqualification (as defined in Section 3(a)(39) of the Act) and (y) for so long as the Corporation directly or indirectly controls any Regulated Securities Exchange Subsidiary, neither such Person nor any of its Related Persons is a Trading Permit Holder.

In making such determinations, the Board may impose such conditions and restrictions on such Person and its Related Persons owning any shares of stock of the Corporation entitled to vote on any matter as the Board may in its sole discretion deem necessary, appropriate or desirable in furtherance of the objectives of the Act and the governance of the Corporation.

(iii) If and to the extent that shares of stock of the Corporation beneficially owned by any Person or its Related Persons are held of record by any other Person, this Section (a) shall be enforced against such record owner by limiting the votes entitled to be cast by such record owner in a manner that will accomplish the limitations contained in this Section (a) applicable to such Person and its Related Persons.

(iv) The limitations set forth in the first paragraph of this Section (a) shall not apply to (x) any solicitation of any revocable proxy from any stockholder of the Corporation by or on behalf of the Corporation or by any officer or director of the Corporation acting on behalf of the Corporation or (y) any solicitation of any revocable proxy from any stockholder of the Corporation by any other stockholder that is conducted pursuant to, and in accordance with, Regulation 14A promulgated pursuant to the Act (other than a solicitation pursuant to Rule 14a-2(b)(2) promulgated under the Act, with respect to which this Section (a) of this Article Sixth shall apply).

(v) For purposes of this Section (a), no Person shall be deemed to have any agreement, arrangement or understanding to act together with respect to voting shares of stock of the Corporation solely because such Person or any of such Person's Related Persons has or shares the power to vote or direct the voting of such shares of stock as a result of (x) any solicitation of any revocable proxy from any stockholder of the Corporation by or on behalf of the Corporation or by any officer or director of the Corporation acting on behalf of the Corporation or (y) any solicitation of any revocable proxy from any stockholder of the Corporation by any other stockholder that is conducted pursuant to, and in accordance with, Regulation 14A promulgated pursuant to the Act (other than a solicitation pursuant to Rule 14a-2(b)(2) promulgated under the Act, with respect to which this Section (a) of this Article Sixth shall apply), except if such power (or the arrangements relating thereto) is then reportable under Item 6 of Schedule 13D under the Act (or any similar provision of a comparable or successor report).

(b) *Ownership Concentration Limitation.* Except as otherwise provided in this Section (b), no Person, either alone or together with its Related Persons, shall be permitted at any time to beneficially own directly or indirectly shares of stock of the Corporation representing in the aggregate more than 20% of the then outstanding shares of stock of the Corporation (the "*Ownership Limitation*").

(i) The Ownership Limitation shall apply to each Person unless and until: (x) such Person shall have delivered to the Corporation not less than 45 days (or such shorter period as the Board shall expressly consent to) prior to the acquisition of any shares that would cause such Person (either alone or together with its Related Persons) to exceed the Ownership Limitation, a notice in writing, of such Person's intention to acquire such ownership; (y) the Board shall have resolved to expressly permit such ownership; and (z) such resolution shall have been filed with, and approved by, the SEC under Section 19(b) of the Act and shall have become effective thereunder.

(ii) Subject to its fiduciary obligations under applicable law, the Board shall not adopt any resolution permitting ownership in excess of the Ownership Limitation unless the Board shall have determined that:

(A) such acquisition of beneficial ownership by such Person, either alone or together with its Related Persons, will not impair the ability of any Regulated Securities Exchange

Subsidiary to discharge its responsibilities under the Act and the rules and regulations thereunder and is otherwise in the best interests of the Corporation, its stockholders and the Regulated Securities Exchange Subsidiaries;

(B) such acquisition of beneficial ownership by such Person, either alone or together with its Related Persons, will not impair the SEC's ability to enforce the Act. In making such determinations under clauses (A) and (B) of this Section (b)(ii), the Board may impose such conditions and restrictions on such Person and its Related Persons owning any shares of stock of the Corporation entitled to vote on any matter as the Board may in its sole discretion deem necessary, appropriate or desirable in furtherance of the objectives of the Act and the governance of the Corporation;

(C) neither such Person nor any of its Related Persons is subject to any statutory disqualification (as defined in Section 3(a)(39) of the Act); and

(D) for so long as the Corporation directly or indirectly controls any Regulated Securities Exchange Subsidiary, neither such Person nor any of its Related Persons is a Trading Permit Holder.

(iii) Unless the conditions specified in Section (b)(i) of this Article Sixth are met, if any Person, either alone or together with its Related Persons, at any time beneficially owns shares of stock of the Corporation in excess of the Ownership Limitation, the Corporation shall be obligated to redeem promptly, at a price equal to the par value of such shares of stock and to the extent funds are legally available therefor, that number of shares of stock of the Corporation necessary so that such Person, together with its Related Persons, shall beneficially own directly or indirectly shares of stock of the Corporation representing in the aggregate no more than 20% of the then outstanding shares of the Corporation, after taking into account that such redeemed shares shall become treasury shares and shall no longer be deemed to be outstanding.

(c) Redemptions.

(i) In the event the Corporation shall redeem shares of stock (the "*Redeemed Stock*") of the Corporation pursuant to any provision of this Article Sixth, notice of such redemption shall be given by first class mail, postage prepaid, mailed not less than five business nor more than 60 calendar days prior to the redemption date, to the holder of the Redeemed Stock, at such holder's address as the same appears on the stock register of the Corporation. Each such notice shall state: (w) the redemption date; (x) the number of shares of Redeemed Stock to be redeemed; (y) the aggregate redemption price, which shall equal the aggregate par value of such shares; and (z) the place or places where such Redeemed Stock is to be surrendered for payment of the aggregate redemption price. Failure to give notice as aforesaid, or any defect therein, shall not affect the validity of the redemption of Redeemed Stock. From and after the redemption date (unless the Corporation shall default in providing funds for the payment of the redemption price), the shares of Redeemed Stock which have been redeemed as aforesaid shall become treasury shares and shall no longer be deemed to be outstanding, and all rights of the holder of such Redeemed Stock as a stockholder of the Corporation (except the right to receive from the Corporation the redemption price against delivery to the Corporation of evidence of ownership of such shares) shall cease.

(ii) If and to the extent that shares of stock of the Corporation beneficially owned by any Person or its Related Persons are held of record by any other Person, this Article Sixth shall

be enforced against such record owner by requiring the redemption of shares of stock of the Corporation held by such record owner in accordance with this Article Sixth, in a manner that will accomplish the Ownership Limitation applicable to such Person and its Related Persons.

(d) *Right to Information.* The Corporation shall have the right to require any Person and its Related Persons that the Board reasonably believes (x) to be subject to the limitations contained in Section (a) of this Article Sixth, (y) to beneficially own shares of stock of the Corporation entitled to vote on any matter in excess of the Ownership Limitation, or (z) to beneficially own an aggregate of 5% or more of the then outstanding shares of stock of the Corporation entitled to vote on any matter, which ownership such Person, either alone or together with its Related Persons, has not reported to the Corporation, to provide to the Corporation, upon the Corporation's request, complete information as to all shares of stock of the Corporation beneficially owned by such Person and its Related Persons and any other factual matter relating to the applicability or effect of this Article Sixth as may reasonably be requested of such Person and its Related Persons. Any constructions, applications or determinations made by the Board pursuant to this Article Sixth in good faith and on the basis of such information and assistance as was then reasonably available for such purpose shall be conclusive and binding upon the Corporation and its directors, officers and stockholders.

SEVENTH: (a) *Authority.* The governing body of the Corporation shall be the Board. The business and affairs of the Corporation shall be managed by or under the direction of the Board.

(b) *Number of Directors.* The Board shall consist of not less than 11 and not more than 23 directors, the exact number to be fixed in accordance with the Bylaws of the Corporation.

EIGHTH: No Person that is subject to any statutory disqualification (as defined in Section 3(a)(39) of the Act) may be a director or officer of the Corporation.

NINTH: *No Action by Written Consent.* Any action required or permitted to be taken by the stockholders of the Corporation must be effected at a duly called annual or special meeting of stockholders of the Corporation and may not be effected by any consent in writing by such stockholders.

TENTH: (a) The Corporation shall, to the fullest extent permitted by applicable law as it presently exists or may hereafter be amended, indemnify and hold harmless any Person (a "Covered Person") who was or is made or is threatened to be made a party or is otherwise involved in any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (a "proceeding"), by reason of the fact that he or she is or was a director, officer or member of a committee of the Corporation, or, while a director or officer of the Corporation, is or was serving at the request of the Corporation as a director or officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise or non-profit entity, including service with respect to employee benefit plans, against all liability and loss suffered and expenses (including attorneys' fees), judgment, fines and amounts paid in settlement actually and reasonably incurred by such Covered Person in connection with a proceeding. Notwithstanding the preceding sentence, except as otherwise provided in Section (c) of this Article Tenth, the Corporation shall be required to indemnify a Covered Person in connection with a proceeding (or part thereof) commenced by such Covered Person only if the commencement of such proceeding (or part thereof) by the Covered Person was authorized in the specific case by the Board.

(b) Expenses (including attorneys' fees) incurred by a Covered Person in defending a proceeding, including appeals, shall, to the extent not prohibited by law, be paid by the Corporation in advance of the final disposition of such proceeding; provided, however, that the Corporation shall not be required to advance any expenses to a Person against whom the Corporation directly brings an action, suit or proceeding alleging that such Person (1) committed an act or omission not in good faith or (2) committed an act of intentional misconduct or a knowing violation of law. Additionally, an advancement of expenses incurred by a Covered Person shall be made only upon delivery to the Corporation of an undertaking, by or on behalf of such Covered Person, to repay all amounts so advanced if it shall ultimately be determined by final judicial decision from which there is no further right to appeal or otherwise in accordance with Delaware law that such Covered Person is not entitled to be indemnified for such expenses under this Article Tenth.

(c) If a claim for indemnification (following the final disposition of such action, suit or proceeding) or advancement of expenses under this Article Tenth is not paid in full within thirty days after a written claim therefor by the Covered Person has been received by the Corporation, the Covered Person may file suit to recover the unpaid amount of such claim and, if successful in whole or in part, shall be entitled to be paid the expense of prosecuting such claim to the fullest extent permitted by law. In any action the Corporation shall have the burden of proving that the Covered Person is not entitled to the requested indemnification or advancement of expenses under applicable law.

(d) The provisions of this Article Tenth shall be deemed to be a contract between the Corporation and each Covered Person who serves in any such capacity at any time while this Article Tenth is in effect, and any repeal or modification of any applicable law or of this Article Tenth shall not affect any rights or obligations then existing with respect to any state of facts then or theretofore existing or any action, suit or proceeding theretofore or thereafter brought or threatened based in whole or in part upon any such state of facts.

(e) Persons not expressly covered by the foregoing provisions of this Article Tenth, such as those (x) who are or were employees or agents of the Corporation, or are or were serving at the request of the Corporation as employees or agents of another corporation, partnership, joint venture, trust or other enterprise, or (y) who are or were directors, officers, employees or agents of a constituent corporation absorbed in a consolidation or merger in which the Corporation was the resulting or surviving corporation, or who are or were serving at the request of such constituent corporation as directors, officers, employees or agents of another corporation, partnership, joint venture, trust or other enterprise, may be indemnified or advanced expenses to the extent authorized at any time or from time to time by the Board.

(f) The rights conferred on any Covered Person by this Article Tenth shall not be deemed exclusive of any other rights to which such Covered Person may be entitled by law or otherwise, and shall continue as to a Person who has ceased to be a director, officer, employee or agent and shall inure to the benefit of the heirs, executors and administrators of such Person.

(g) The Corporation's obligation, if any, to indemnify or to advance expenses to any Covered Person who was or is serving at its request as a director, officer, employee or agent of another corporation, partnership, joint venture, trust, enterprise or non-profit entity shall be reduced by any amount such Covered Person may collect as indemnification or advancement of expenses from such other corporation, partnership, joint venture, trust, enterprise or non-profit entity.

(h) Any repeal or modification of the foregoing provisions of this Article Tenth shall not adversely affect any right or protection hereunder of any Covered Person in respect of any act or omission occurring prior to the time of such repeal or modification.

(i) The Corporation may purchase and maintain insurance, at its expense, to protect itself and any director, manager, officer, trustee, employee or agent of the Corporation or another corporation, or of a partnership, limited liability company, joint venture, trust or other enterprise against any expense, liability or loss (as such terms are used in this Article Tenth), whether or not the Corporation would have the power to indemnify such Person against such expense, liability or loss under the GCL.

ELEVENTH: The Corporation reserves the right to amend this Certificate of Incorporation, and to change or repeal any provision of the Certificate of Incorporation, in the manner prescribed at the time by statute, and all rights conferred upon stockholders by such Certificate of Incorporation are granted subject to this reservation. For so long as this Corporation shall control, directly or indirectly, any Regulated Securities Exchange Subsidiary, before any amendment to or repeal of any provision of this Certificate of Incorporation shall be effective, such amendment or repeal shall be submitted to the board of directors of each Regulated Securities Exchange Subsidiary and if such amendment or repeal must be filed with or filed with and approved by the SEC, then such amendment or repeal shall not become effective until filed with or filed with and approved by the SEC, as the case may be.

TWELFTH: The Bylaws of the Corporation may be altered, amended or repealed, and new Bylaws may be adopted at any time, by the Board. Stockholders of the Corporation may alter, amend or repeal any Bylaw; provided that, in addition to any other vote which may be required by law, the affirmative vote of the holders of a majority of the votes entitled to be cast by the holders of the then-outstanding shares of capital stock of the Corporation entitled to vote generally in the election of directors, voting together as a single class, shall be required for the stockholders of the Corporation to adopt, alter, amend or repeal any provision of the Corporation's Bylaws. For so long as this Corporation shall control, directly or indirectly, any Regulated Securities Exchange Subsidiary, before any amendment to or repeal of any provision of the Corporation's Bylaws shall be effective, such amendment or repeal shall be submitted to the board of directors of each Regulated Securities Exchange Subsidiary and if such amendment or repeal must be filed with or filed with and approved by the SEC, then such amendment or repeal shall not become effective until filed with or filed with and approved by the SEC, as the case may be.

THIRTEENTH: A director of the Corporation shall not be liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director, except to the extent such exemption from liability or limitation thereof is not permitted under the GCL as the same exists or may hereafter be amended. Any amendment, modification or repeal of the foregoing sentence shall not adversely affect any right or protection of a director of the Corporation hereunder in respect of any act or omission occurring prior to the time of such amendment, modification or repeal.

FOURTEENTH: The Corporation, its directors, officers, agents and employees, irrevocably submit to the jurisdiction of the U.S. federal courts, the SEC, and the Regulated Securities Exchange Subsidiaries, for the purposes of any suit, action or proceeding pursuant to U.S. federal securities laws or the rules or regulations thereunder, commenced or initiated by the SEC arising out of, or relating to, the Regulated Securities Exchange Subsidiaries' activities (and shall be

deemed to agree that the Corporation may serve as the U.S. agent for purposes of service of process in such suit, action or proceeding), and hereby waive, and agree not to assert by way of motion, as a defense or otherwise in any such suit, action or proceeding, any claims that they are not personally subject to the jurisdiction of the U.S. federal courts, the SEC, and the Regulated Securities Exchange Subsidiaries, that the suit, action or proceeding is an inconvenient forum or that the venue of the suit, action or proceeding is improper, or that the subject matter thereof may not be enforced in or by such courts or agency.

FIFTEENTH: To the fullest extent permitted by applicable law, all confidential information pertaining to the self-regulatory function of Regulated Securities Exchange Subsidiaries (including but not limited to disciplinary matters, trading data, trading practices and audit information) contained in the books and records of any Regulated Securities Exchange Subsidiary that shall come into the possession of the Corporation shall: (1) not be made available to any Persons (other than as provided in the next sentence) other than to those officers, directors, employees and agents of the Corporation that have a reasonable need to know the contents thereof; (2) be retained in confidence by the Corporation and the officers, directors, employees and agents of the Corporation; and (3) not be used for any commercial purposes. Notwithstanding the foregoing sentence, nothing in this Certificate of Incorporation shall be interpreted so as to limit or impede the rights of the SEC or any Regulated Securities Exchange Subsidiary to access and examine such confidential information pursuant to the federal securities laws and the rules and regulations thereunder, or to limit or impede the ability of any officers, directors, employees or agents of the Corporation to disclose such confidential information to the SEC or any Regulated Securities Exchange Subsidiary.

For so long as the Corporation directly or indirectly controls any Regulated Securities Exchange Subsidiary, the books, records, premises, officers, directors and employees of the Corporation shall be deemed to be the books, records, premises, officers, directors and employees of the Regulated Securities Exchange Subsidiary for purposes of and subject to oversight pursuant to the Act, but only to the extent that such books, records, premises, officers, directors and employees of the Corporation relate to the business of such Regulated Securities Exchange Subsidiary. The books and records related to the business of a Regulated Securities Exchange Subsidiary shall be subject at all times to inspection and copying by the SEC and the Regulated Securities Exchange Subsidiary.

SIXTEENTH: (a) The Corporation shall comply with the federal securities laws and the rules and regulations thereunder and shall cooperate with the SEC, and each Regulated Securities Exchange Subsidiary pursuant to and to the extent of its regulatory authority, and shall take reasonable steps necessary to cause its agents to cooperate with the SEC and, where applicable, the Regulated Securities Exchange Subsidiaries pursuant to their regulatory authority, with respect to such agents' activities related to the Regulated Securities Exchange Subsidiaries. No stockholder, employee, former employee, beneficiary, customer, creditor, community or regulatory authority or member thereof shall have any rights against the Corporation or any director, officer or employee of the Corporation under this Section (a) of this Article Sixteenth.

(b) The Corporation shall take reasonable steps necessary to cause its directors, officers and employees, prior to accepting such a position with the Corporation, to consent in writing to the applicability to them of Article Fourteenth, Article Fifteenth and Sections (c) and (d) of this Article Sixteenth of this Certificate of Incorporation, as applicable, with respect to their activities related to any of the Regulated Securities Exchange Subsidiaries. In addition, the Corporation shall take

reasonable steps necessary to cause its agents, prior to accepting such a position with the Corporation, to be subject to the provisions of Article Fourteenth, Article Fifteenth and Sections (c) and (d) of this Article Sixteenth of this Certificate of Incorporation, as applicable, with respect to their activities related to any of the Regulated Securities Exchange Subsidiaries.

(c) For so long as the Corporation shall control, directly or indirectly, any Regulated Securities Exchange Subsidiary, each officer, director and employee of the Corporation shall give due regard to the preservation of the independence of the self regulatory function of the Regulated Securities Exchange Subsidiaries and to each of the Regulated Securities Exchange Subsidiaries' obligations under the Act, and the rules thereunder including, without limitation, Section 6(b) of the Act and shall not take any actions which he or she knows or reasonably should have known would interfere with the effectuation of any decisions by the board of directors of any Regulated Securities Exchange Subsidiary relating to such Regulated Securities Exchange Subsidiary's regulatory functions (including disciplinary matters) or which would adversely affect the ability of the Regulated Securities Exchange Subsidiary to carry out such Regulated Securities Exchange Subsidiary's responsibilities under the Act.

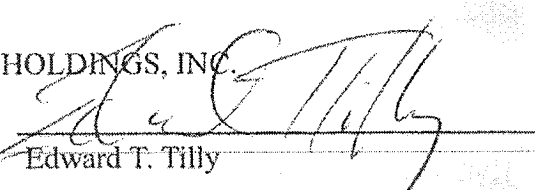
(d) In discharging his or her responsibilities as a member of the Board, each director shall take into consideration the effect that the Corporation's actions would have on the ability of each Regulated Securities Exchange Subsidiary to carry out its responsibilities under the Act and on the ability of each Regulated Securities Exchange Subsidiary and the Corporation: to engage in conduct that fosters and does not interfere with each Regulated Securities Exchange Subsidiary's and the Corporation's ability to prevent fraudulent and manipulative acts and practices; to promote just and equitable principles of trade; to foster cooperation and coordination with Persons engaged in regulating, clearing, settling, processing information with respect to, and facilitating transactions in securities; to remove impediments to and perfect the mechanisms of a free and open market and a national market system; and, in general, to protect investors and the public interest. In discharging his or her responsibilities as a member of the Board or as an officer or employee of the Corporation, each such director, officer or employee shall comply with the federal securities laws and the rules and regulations thereunder and shall cooperate with the SEC, and each Regulated Securities Exchange Subsidiary pursuant to its regulatory authority.

SEVENTEENTH: Unless and except to the extent that the Bylaws of the Corporation shall so require, the election of directors of the Corporation need not be by written ballot.

IN WITNESS WHEREOF, CBOE Holdings, Inc. has caused this certificate to be signed as of this 16th day of October, 2017.

CBOE HOLDINGS, INC.

By:

Name:  Edward T. Tilly

Its: Chairman and Chief Executive Officer

**FOURTH AMENDED AND RESTATED
BYLAWS
OF
CBOE GLOBAL MARKETS, INC.**

ARTICLE 1—OFFICES

1.1 *Registered Offices.* The registered office of Cboe Global Markets, Inc. (the “Corporation”) in the State of Delaware shall be located at Corporation Trust Center, 1209 Orange Street, in the City of Wilmington, County of New Castle, Delaware 19805. The name of the Corporation’s registered agent at such address shall be The Corporation Trust Company. The registered office and/or registered agent of the Corporation may be changed from time to time by action of the Board of Directors of the Corporation (the “Board of Directors”).

1.2 *Other Offices.* The Corporation may also have offices at such other places both within and without the State of Delaware as the Board of Directors may from time to time determine or the business of the Corporation may require.

1.3 *Books.* The books of the Corporation may be kept within or without the State of Delaware as the Board of Directors may from time to time determine or the business of the Corporation may require, provided such books and records are kept within the United States.

ARTICLE 2—STOCKHOLDERS

2.1 *Place of Meetings.* All meetings of stockholders shall be held at such place, if any, within or without the State of Delaware as may be designated from time to time by the Board of Directors or the Chairman of the Board (or, if there is no Chairman of the Board, the Chief Executive Officer) or, if not so designated, at the principal place of business of the Corporation in Chicago, Illinois.

2.2 *Annual Meeting.* The annual meeting of stockholders for the election of directors and for the transaction of such other business as may properly be brought before the meeting shall be held on such date and at such time and at such place, if any, within or without the State of Delaware as shall be fixed by the Board of Directors, pursuant to a resolution adopted by the affirmative vote of a majority of the total number of directors then in office, or the Chairman of the Board (or, if there is no Chairman of the Board, the Chief Executive Officer) and stated in the notice of the meeting. If no annual meeting is held in accordance with the foregoing provisions, the Board of Directors shall cause the meeting to be held as soon thereafter as convenient. If no annual meeting is held in accordance with the foregoing provisions, a special meeting may be held in lieu of the annual meeting, and any action taken at that special meeting shall have the same effect as if it had been taken at the annual meeting, and in such case all references in these Bylaws to the annual meeting of stockholders shall be deemed to refer to such special meeting.

2.3 *Special Meeting.* Special meetings of stockholders may be called at any time by only the Chairman of the Board, the Chief Executive Officer, the President or the Board of Directors pursuant to a resolution adopted by the affirmative vote of a majority of the total number of directors then in office. Special meetings may not be called by any other person or persons. Any business transacted at any special meeting of stockholders shall be limited to matters relating to the purpose or purposes stated in the notice of meeting.

2.4 *Notice of Meetings.* Except as otherwise provided by law, the Certificate of Incorporation or these Bylaws, notice of each meeting of stockholders, whether annual or special, shall be given in any manner permitted by law not less than ten (10) nor more than sixty (60) days before the date of the meeting to each stockholder as of the record date for determining the stockholders entitled to notice of the meeting. The notices of all meetings shall state the place, if any, date and hour of the meeting, the means of remote communications, if any, by which stockholders and proxy holders may be deemed to be present in person and vote at such meeting, and the record date for determining the stockholders entitled to vote at the meeting (if such date is different from the record date for stockholders entitled to notice of the meeting). The notice of a special meeting shall state, in addition, the purpose or purposes for which the meeting is called.

2.5 *Voting List.* The officer who has charge of the stock ledger shall prepare and make, at least ten (10) days before every meeting of stockholders, a complete list of the stockholders entitled to vote at the meeting (provided, however, if the record date for determining the stockholders entitled to vote is less than ten (10) days before the date of the meeting, the list shall reflect the stockholders entitled to vote as of the tenth day before the meeting date), arranged in alphabetical order, and showing the address of each stockholder and the number of shares registered in the name of each stockholder. Such list shall be open to the examination of any stockholder, for any purpose germane to the meeting, at least ten (10) days prior to the meeting (i) on a reasonably accessible electronic network, provided that the information required to gain access to such list is provided with the notice of meeting or (ii) during ordinary business hours, at the principal place of business of the Corporation. The list of stockholders must also be open to examination at the meeting as required by applicable law. Except as otherwise provided by law, the stock ledger shall be the only evidence as to who are the stockholders entitled to examine the list of stockholders required by this *Section 2.5* or to vote in person or by proxy at any meeting of stockholders.

2.6 *Quorum.* Except as otherwise provided by law, the Certificate of Incorporation or these Bylaws, the holders of a majority in voting power of the shares of the capital stock of the Corporation issued and outstanding and entitled to vote at the meeting (after taking into account the effect of any reduction of the number of shares entitled to vote as a result of the voting limitations imposed by Article Sixth of the Corporation's Certificate of Incorporation, if any), present in person or represented by proxy, shall constitute a quorum for the transaction of business.

2.7 *Adjournments.* Any meeting of stockholders may be adjourned to any other time and to any other place at which a meeting of stockholders may be held under these Bylaws by the holders of a majority in voting power of the stockholders present or represented at the meeting and entitled to vote, although less than a quorum, or by any officer entitled to preside at or to act as secretary of such meeting. Notice need not be given of any such adjourned meeting if the time and place thereof are announced at the meeting at which the adjournment is taken. If the adjournment is for more than thirty (30) days, a notice of the adjourned meeting shall be given to each stockholder of record entitled to vote at the meeting. If after the adjournment a new record date for determination of stockholders entitled to vote is fixed for the adjourned meeting, the Board of Directors shall fix as the record date for determining stockholders entitled to notice of such adjourned meeting the same or an earlier date as that fixed for determination of stockholders entitled to vote at the adjourned meeting, and shall give notice of the adjourned meeting to each stockholder of record as of the record date so fixed for notice of such adjourned meeting.

2.8 *Voting.* Except as otherwise provided by the General Corporation Law of the State of Delaware (“DGCL”), the Certificate of Incorporation or these Bylaws, each stockholder shall have one vote for each share of capital stock entitled to vote and held of record by such stockholder.

2.9 *Proxy Representation.* Every stockholder may authorize another person or persons to act for such stockholder by proxy in all matters in any manner permitted by law. No proxy shall be voted or acted upon after three years from its date unless the proxy provides for a longer period. A duly executed proxy shall be irrevocable if it states that it is irrevocable and if, and only as long as, it is coupled with an interest sufficient in law to support an irrevocable power. A proxy may be made irrevocable regardless of whether the interest with which it is coupled is an interest in the stock itself or an interest in the Corporation generally. The authorization of a proxy may but need not be limited to specified action, provided, however, that if a proxy limits its authorization to a meeting or meetings of stockholders, unless otherwise specifically provided such proxy shall entitle the holder thereof to vote at any adjourned session but shall not be valid after the final adjournment thereof. A proxy purporting to be authorized by or on behalf of a stockholder, if accepted by the Corporation in its discretion, shall be deemed valid unless challenged at or prior to its exercise, and the burden of proving invalidity shall rest on the challenger. A stockholder may revoke any proxy which is not irrevocable by attending the meeting and voting in person or by delivering to the Secretary of the Corporation a revocation of the proxy or a new proxy bearing a later date.

2.10 *Action at Meeting.* When a quorum is present at any meeting, (a) a majority of the votes properly cast upon any question other than an election of directors shall decide the question, except when a different vote is required by the Certificate of Incorporation, these Bylaws, the rules or regulations of any stock exchange applicable to the Corporation, or any law or regulation applicable to the Corporation or its securities, and (b) each nominee for director shall be elected to the Board of Directors if a majority of the votes properly cast are in favor of such nominee’s election (i.e., if the number of votes properly cast “for” a nominee’s election exceeds the number of votes properly cast “against” that nominee’s election (with “abstentions” and “broker nonvotes” not counted as a vote cast either “for” or “against” that director’s election)); *provided, however,* that, if, as of the last date by which stockholders of the Corporation may submit notice to nominate a person for election as a director pursuant to *Section 2.11* of these Bylaws or pursuant to any rule or regulation of the Securities and Exchange Commission, the number of nominees for director exceeds the number of directors to be elected at any such meeting (a “Contested Election”), a plurality of the votes properly cast for the election of directors shall be sufficient to elect directors. No ballot shall be required for any election unless requested by a stockholder present or represented at the meeting and entitled to vote in the election.

2.11 *Nomination of Directors.* Only persons who are nominated in accordance with the following procedures shall be eligible for election as directors. The nomination for election to the Board of Directors at an annual meeting of stockholders may be made only (A) pursuant to the Corporation’s notice of meeting (or any supplement thereto), (B) by the Board of Directors, any committee thereof or (C) by any stockholder (i) who is a stockholder of record on the date of the notice given pursuant to this *Section 2.11* and who is entitled to vote at the annual meeting and (ii) who complies with the notice procedures set forth in this *Section 2.11*. Such nominations, other than those made by or on behalf of the Board of Directors or any committee thereof, shall be made by notice in writing to the Secretary and received at the principal executive offices of the Corporation not less than ninety (90) days nor more than one hundred twenty (120) days prior to

the anniversary date of the immediately preceding annual meeting of stockholders; *provided, however*, that if the annual meeting is not held within thirty (30) days before or more than seventy (70) days after such anniversary date, then such nomination shall have been delivered to or mailed and received by the Secretary not later than the close of business on the 10th day following the date on which public announcement of the annual meeting date was made. In no event shall the public announcement of an adjournment or postponement of an annual meeting commence a new time period (or extend any time period) for the giving of a stockholder's notice as described above. Such notice shall set forth (a) as to each proposed nominee (i) the name, age, business address and residence address of such nominee, (ii) the principal occupation or employment of such nominee, (iii) the number of shares of stock of the Corporation which are owned beneficially and the number of shares of stock of the Corporation which are held of record by such nominee, and (iv) any other information concerning the nominee that must be disclosed as to nominees in proxy solicitations pursuant to Regulation 14A under the Securities Exchange Act of 1934, as amended (the "Act"), and the rules and regulations promulgated thereunder, including such person's written consent to be named in the proxy statement as a nominee and to serve as a director if elected ; and (b) as to the stockholder giving the notice and the beneficial owner, if any, on whose behalf the nomination is made (i) the name and address of such stockholder, as they appear on the Corporation's books, and of such beneficial owner, (ii) the class and number of shares of capital stock of the Corporation which are owned beneficially and of record by such stockholder and such beneficial owner, (iii) a description of any agreement, arrangement or understanding with respect to the nomination between or among such stockholder and/or such beneficial owner, any of their respective affiliates or associates, and any others acting in concert with any of the foregoing, including any nominee, (iv) a description of any agreement, arrangement or understanding (including any derivative or short positions, profit interests, options, warrants, convertible securities, stock appreciation or similar rights, hedging transactions, and borrowed or loaned shares) that has been entered into as of the date of the stockholder's notice by, or on behalf of, such stockholder and such beneficial owners, whether or not such instrument or right shall be subject to settlement in underlying shares of capital stock of the Corporation, the effect or intent of which is to mitigate loss to, manage risk or benefit of share price changes for, or increase or decrease the voting power of, such stockholder or such beneficial owner, with respect to shares of capital stock of the Corporation, (v) a representation that the stockholder is a holder of record of stock of the Corporation entitled to vote at such meeting and intends to appear in person or by proxy at the meeting to propose such nomination, (vi) a representation whether the stockholder or the beneficial owner, if any, intends or is part of a group which intends (a) to deliver a proxy statement and/or form of proxy to holders of at least the percentage of the Corporation's outstanding capital stock required to elect the nominee and/or (b) otherwise to solicit proxies or votes from stockholders in support of such nomination, and (vii) any other information relating to such stockholder and beneficial owner, if any, required to be disclosed in a proxy statement or other filings required to be made in connection with solicitations of proxies for, as applicable, the proposal and/or for the election of directors in an election contest pursuant to and in accordance with Section 14(a) of the Exchange Act and the rules and regulations promulgated thereunder. The Corporation may require any proposed nominee to furnish such other information as the Corporation may reasonably require to determine the eligibility of such proposed nominee to serve as a director of the Corporation.

The chairman of the meeting may, if the facts warrant, determine that a nomination was not made in accordance with the foregoing procedure, and, if he or she should so determine, he or she shall so declare to the meeting, and the defective nomination shall be disregarded.

2.12 Notice of Business at Annual Meetings. At an annual meeting of the stockholders, only such business shall be conducted as shall have been properly brought before the meeting. To be properly brought before an annual meeting, business must be (a) specified in the notice of meeting (or any supplement thereto) given by or at the direction of the Board of Directors, (b) otherwise properly brought before the meeting by or at the direction of the Board of Directors (or any committee thereof), or (c) otherwise properly brought before an annual meeting by a stockholder (i) who is a stockholder of record on the date of the giving of notice provided for in this *Section 2.12* and entitled to vote at such annual meeting, and (ii) who complies with the notice procedures set forth in this *Section 2.12*. For business to be properly brought before an annual meeting by a stockholder, if such business relates to the election of directors of the Corporation, the procedures in *Section 2.11* must be complied with. If such business relates to any other matter, the stockholder must have given timely notice thereof in writing to the Secretary. To be timely, a stockholder's notice must be delivered to or mailed to the Secretary and received at the principal executive offices of the Corporation not less than ninety (90) days nor more than one hundred twenty (120) days prior to the anniversary date of the immediately preceding annual meeting of stockholders; *provided, however*, that if the annual meeting is not held within thirty (30) days before or seventy (70) days after such anniversary date, then for the notice by the stockholder to be timely it must be so received not later than the close of business on the 10th day following the date on which public announcement of the annual meeting date was made. In no event shall the public announcement of an adjournment or postponement of an annual meeting commence a new time period (or extend any time period) for the giving of a stockholder's notice as described above. To be in proper written form, a stockholder's notice to the Secretary shall set forth (a) as to any business (other than nominations for the election of directors) that the stockholder proposes to bring before the meeting, a brief description of the business desired to be brought before the meeting, the text of the proposal or business (including the text of any resolutions proposed for consideration and, in the event that such business includes a proposal to amend the Bylaws of the Corporation, the language of the proposed amendment), the reasons for conducting such business at the meeting and any material interest in such business of such stockholder and the beneficial owner, if any, on whose behalf the proposal is made; and (b) as to the stockholder giving the notice and the beneficial owner, if any, on whose behalf the proposal is made (i) the name and address of such stockholder, as they appear on the Corporation's books, and of such beneficial owner, (ii) the class and number of shares of capital stock of the Corporation which are owned beneficially and of record by such stockholder and such beneficial owner, (iii) a description of any agreement, arrangement or understanding with respect to the proposal between or among such stockholder and/or such beneficial owner, any of their respective affiliates or associates, and any others acting in concert with any of the foregoing, (iv) a description of any agreement, arrangement or understanding (including any derivative or short positions, profit interests, options, warrants, convertible securities, stock appreciation or similar rights, hedging transactions, and borrowed or loaned shares) that has been entered into as of the date of the stockholder's notice by, or on behalf of, such stockholder and such beneficial owners, whether or not such instrument or right shall be subject to settlement in underlying shares of capital stock of the Corporation, the effect or intent of which is to mitigate loss to, manage risk or benefit of share price changes for, or increase or decrease the voting power of, such stockholder or such beneficial owner, with respect to shares of

capital stock of the Corporation, (v) a representation that the stockholder is a holder of record of stock of the Corporation entitled to vote at such meeting and intends to appear in person or by proxy at the meeting to propose such business, and (vi) a representation whether the stockholder or the beneficial owner, if any, intends or is part of a group which intends (a) to deliver a proxy statement and/or form of proxy to holders of at least the percentage of the Corporation's outstanding capital stock required to approve or adopt the proposal and/or (b) otherwise to solicit proxies or votes from stockholders in support of such proposal. Notwithstanding anything in these Bylaws to the contrary, no business shall be conducted at any annual meeting except in accordance with the procedures set forth in *Section 2.11* or this *Section 2.12*, except that any stockholder proposal which complies with Rule 14a-8 of the proxy rules, or any successor provision, promulgated under the Act, and is to be included in the Corporation's proxy statement for an annual meeting of stockholders shall be deemed to comply with the requirements of this *Section 2.12*. Notwithstanding the foregoing provisions of this *Section 2.12* or *Section 2.11*, unless otherwise required by law, if the stockholder (or a qualified representative of the stockholder) does not appear at the annual or special meeting of stockholders of the Corporation to present a nomination or proposed business, such nomination may be disregarded and such proposed business need not be transacted, notwithstanding that proxies in respect of such vote may have been received by the Corporation. For purposes of this *Section 2.12* and *Section 2.11*, to be considered a qualified representative of the stockholder, a person must be a duly authorized officer, manager or partner of such stockholder or must be authorized by a writing executed by such stockholder or an electronic transmission delivered by such stockholder to act for such stockholder as proxy at the meeting of stockholders and such person must produce such writing or electronic transmission, or a reliable reproduction of the writing or electronic transmission, at the meeting of stockholders.

For purposes of *Section 2.11* and *Section 2.12*, "public announcement" shall include disclosure in a press release reported by the Dow Jones News Service, Associated Press or comparable national news service or in a document publicly filed by the Corporation with the Securities and Exchange Commission pursuant to Section 13, 14 or 15(d) of the Act. Notwithstanding the foregoing provisions in *Section 2.11* or *Section 2.12*, a stockholder shall also comply with all applicable requirements of the Act and the rules and regulations thereunder with respect to the matters set forth in this *Section 2.11* and *Section 2.12*. Nothing in either *Section 2.11* or *Section 2.12* shall be deemed to affect any rights (a) of stockholders to request inclusion of proposals or nominations in the Corporation's proxy statement pursuant to applicable rules and regulations promulgated under the Act or (b) of the holders of any series of Preferred Stock to elect directors pursuant to any applicable provisions of the Certificate of Incorporation.

The chairman of the meeting shall, if the facts warrant, determine that business was not properly brought before the meeting in accordance with the provisions of this *Section 2.12*, and, if he or she should so determine, the chairman shall so declare to the meeting, and any such business not properly brought before the meeting shall not be transacted.

2.13 Action without Meeting. Stockholders may not take any action by written consent in lieu of a meeting.

2.14 Organization. The Chairman of the Board, or in the Chairman of the Board's absence, the Chief Executive Officer or President, shall call meetings of the stockholders to order and act as chairman of such meeting; *provided, however*, that the Board of Directors may appoint any stockholder to act as chairman of any meeting in the absence of the Chairman of the Board. The

Secretary of the Corporation shall act as secretary at all meetings of the stockholders; *provided, however,* that in the absence of the Secretary at any meeting of the stockholders, the chairman of such meeting may appoint any person to act as secretary of the meeting.

2.15 *Inspectors of Election.* The Corporation may, and shall if required by law, in advance of any meeting of stockholders, appoint one or more inspectors of election, who may be employees of the Corporation, to act at the meeting or any adjournment thereof and to make a written report thereof. The Corporation may designate one or more persons as alternate inspectors to replace any inspector who fails to act. In the event that no inspector so appointed or designated is able to act at a meeting of stockholders, the person presiding at the meeting shall appoint one or more inspectors to act at the meeting. Each inspector, before entering upon the discharge of his or her duties, shall take and sign an oath to execute faithfully the duties of inspector with strict impartiality and according to the best of his or her ability. The inspector or inspectors so appointed or designated shall (i) ascertain the number of shares of capital stock of the Corporation outstanding and the voting power of each such share, (ii) determine the shares of capital stock of the Corporation represented at the meeting and the validity of proxies and ballots, (iii) count all votes and ballots, (iv) determine and retain for a reasonable period a record of the disposition of any challenges made to any determination by the inspectors, and (v) certify their determination of the number of shares of capital stock of the Corporation represented at the meeting and such inspectors' count of all votes and ballots. Such certification and report shall specify such other information as may be required by law. In determining the validity and counting of proxies and ballots cast at any meeting of stockholders of the Corporation, the inspectors may consider such information as is permitted by applicable law. No person who is a candidate for an office at an election may serve as an inspector at such election.

2.16 *Conduct of Meetings.* The date and time of the opening and the closing of the polls for each matter upon which the stockholders will vote at a meeting shall be announced at the meeting by the person presiding over the meeting. The Board of Directors may adopt by resolution such rules and regulations for the conduct of the meeting of stockholders as it shall deem appropriate. Except to the extent inconsistent with such rules and regulations as adopted by the Board of Directors, the person presiding over any meeting of stockholders shall have the right and authority to convene and to adjourn the meeting, to prescribe such rules, regulations and procedures and to do all such acts as, in the judgment of such presiding person, are appropriate for the proper conduct of the meeting. Such rules, regulations or procedures, whether adopted by the Board of Directors or prescribed by the presiding person of the meeting, may include, without limitation, the following: (i) the establishment of an agenda or order of business for the meeting; (ii) rules and procedures for maintaining order at the meeting and the safety of those present; (iii) limitations on attendance at or participation in the meeting to stockholders of record of the Corporation, their duly authorized and constituted proxies or such other persons as the presiding person of the meeting shall determine; (iv) restrictions on entry to the meeting after the time fixed for the commencement thereof; and (v) limitations on the time allotted to questions or comments by participants. The presiding person at any meeting of stockholders, in addition to making any other determinations that may be appropriate to the conduct of the meeting, shall, if the facts warrant, determine and declare to the meeting that a matter or business was not properly brought before the meeting and if such presiding person should so determine, such presiding person shall so declare to the meeting and any such matter or business not properly brought before the meeting shall not be transacted or considered. Unless and to the extent determined by the Board of Directors or the

person presiding over the meeting, meetings of stockholders shall not be required to be held in accordance with the rules of parliamentary procedure.

ARTICLE 3—DIRECTORS

3.1 *General Powers.* The business and affairs of the Corporation shall be managed by or under the direction of a Board of Directors, who may exercise all of the powers of the Corporation except as otherwise provided by law, the Certificate of Incorporation or these Bylaws. In the event of a vacancy in the Board of Directors, the remaining directors, except as otherwise provided by law, may exercise the powers of the full Board of Directors until the vacancy is filled.

3.2 *Number; Election; Qualification and Term of Office.* The Board of Directors of the Corporation shall consist of not less than 11 and not more than 23 directors, the exact number to be fixed by the Board of Directors from time to time pursuant to resolution adopted by the Board.

Directors shall be elected annually and shall hold office until the next annual meeting and until such time as their successors are elected or appointed and qualified, except in the event of earlier death, resignation or removal.

3.3 *Independent Directors.* At all times no less than two-thirds of the members of the Board of Directors shall satisfy the independence requirements adopted by the Board of Directors for directors of the Corporation, as may be modified and amended by the Board of Directors from time to time, and which shall satisfy the independence requirements contained in the listing standards of either the New York Stock Exchange or The NASDAQ Stock Market.

3.4 *Resignations.* A director may resign at any time by giving written or electronic notice of his resignation to the Chairman of the Board or the Secretary, and such resignation will be effective when delivered unless the resignation specifies a later effective date or an effective date determined upon the happening of an event or events.

3.5 *Vacancies.* Any vacancy in the Board of Directors, however occurring, including a vacancy resulting from an increase in the number of the directors, may be filled by vote of a majority of the directors then in office, although less than a quorum, or by a sole remaining director. A director elected to fill a vacancy shall hold office until the next annual meeting of stockholders, subject to the election and qualification of his successor and to his earlier death, resignation or removal.

3.6 *Chairman of the Board.* The Board of Directors shall appoint one of the directors to serve as Chairman of the Board. Except as provided for in *Section 3.7* hereof, the Chairman of the Board shall be the presiding officer at all meetings of the Board of Directors and stockholders and shall exercise such other powers and perform such other duties as are delegated to the Chairman of the Board by the Board of Directors.

3.7 *Lead Director.* The Board of Directors may appoint one of the independent directors to serve as the Lead Director. The Lead Director shall perform such duties and possess such powers as the Board of Directors may from time to time prescribe. The Lead Director, if appointed, shall be authorized to preside at meetings of the non-management directors and at meetings of the independent directors of the Board of Directors.

3.8 *Acting Chairman and Vacancy in Chairman of the Board Position.* (a) In the absence or inability to act of the Chairman of the Board, the Board may designate an Acting Chairman of the Board. The Acting Chairman of the Board, in the absence or inability to act of the Chairman,

shall be presiding officer at all meetings of the Board of Directors and shall exercise such other powers and perform such other duties as are delegated to the Acting Chairman by the Board of Directors. The Acting Chairman of the Board may be, but need not be, the same person as the Lead Director.

(b) If a vacancy occurs in the office of Chairman, the Board may fill such vacancy by the affirmative vote of at least a majority of the directors then in office.

3.9 *Regular Meetings.* Regular meetings of the Board of Directors shall be held at such time and at such place as shall be determined by the Chairman of the Board with notice of such determination provided to the full the Board of Directors.

3.10 *Special Meetings.* Special meetings of the Board of Directors may be called by the Chairman of the Board or the Chief Executive Officer and shall be called by the Secretary upon the written request of any four directors. The Secretary shall give at least 24 hours notice of such meeting to each director, either in person, by mail, messenger, overnight courier, facsimile machine, electronic mail or telephone. Every such notice shall state the time and place of the meeting which shall be fixed by the person calling the meeting, but need not state the purpose thereof except as otherwise required by statute.

3.11 *Participation in Meetings.* Except as otherwise provided by law, the Certificate of Incorporation or these Bylaws, the Board of Directors or any members of any committee of the Board of Directors designated by the directors may participate in a meeting of the Board of Directors or such committee by means of conference telephone or other communications equipment by means of which all persons participating in the meeting can hear each other. Participation by such means shall constitute presence in person at such meeting.

3.12 *Action at Meeting.* Except as otherwise provided by law, the Certificate of Incorporation or these Bylaws, at each meeting of the Board of Directors, a whole number of directors equal to at least a majority of the total number of directors constituting the entire Board of Directors shall constitute a quorum for the transaction of business. Except as otherwise provided by law, the Certificate of Incorporation or these Bylaws, at any meeting of the Board of Directors at which a quorum is present, the vote of a majority of the directors present shall be sufficient to take any action, unless a different vote is specified by law, the Certificate of Incorporation or these Bylaws.

3.13 *Action by Consent.* Any action required or permitted to be taken at any meeting of the Board of Directors or of any committee of the Board of Directors may be taken without a meeting, if all members of the Board of Directors or committee, as the case may be, consent to the action in writing or by electronic transmission, and the writing or writings or electronic transmissions are filed with the minutes of proceedings of the Board of Directors or committee of the Board of Directors, as applicable.

3.14 *Compensation of Directors.* The directors may be paid such compensation for their services and such reimbursement for expenses of attendance at meetings as the Board of Directors may from time to time determine. No such payment shall preclude any director from serving the Corporation or any of its parent or subsidiary corporations in any other capacity and receiving compensation for such service.

ARTICLE 4—COMMITTEES

4.1 *Designation of Committees.* The committees of the Board of Directors shall consist of an Executive Committee, an Audit Committee, a Compensation Committee, a Nominating and Governance Committee and such other standing and special committees as may be approved by the Board of Directors. The Corporation shall have such other committees as may be provided in these Bylaws or as may be from time to time appointed by the Board of Directors. The Board of Directors shall designate the members of these other committees and may designate a Chairman and a Vice-Chairman thereof.

4.2 *The Executive Committee.* The Executive Committee will include the Chairman of the Board, the Chief Executive Officer (if a director), the Lead Director, if any, and such other number of directors that the Board of Directors deems appropriate, provided that at all times the majority of the directors serving on the Executive Committee must be independent directors. Members of the Executive Committee (other than those specified in the immediately preceding sentence) shall be recommended by the Nominating and Governance Committee for approval by the Board of Directors. Members of the Executive Committee shall not be subject to removal except by the Board of Directors. The Chairman of the Board shall be the Chairman of the Executive Committee. Each member of this Committee shall be a voting member. The Executive Committee shall have and may exercise all the powers and authority of the Board of Directors in the management of the business and affairs of the Corporation, except it shall not have the power and authority of the Board of Directors to (i) approve or adopt or recommend to the stockholders, any action or matter (other than the election or removal of directors) expressly required by Delaware law to be submitted to stockholders for approval, including, without limitation, amending the Certificate of Incorporation, adopting an agreement of merger or consolidation, approving a sale, lease or exchange of all or substantially all of the Corporation's property and assets, or approval of a dissolution of the Corporation or revocation of a dissolution, or (ii) adopt, alter, amend or repeal any Bylaw of the Corporation.

4.3 *The Audit Committee.* The Audit Committee shall consist of at least three directors, all of whom must be independent directors and all of whom shall be recommended by the Nominating and Governance Committee for approval by the Board of Directors. The exact number of Audit Committee members shall be determined from time to time by the Board of Directors. Members of the Audit Committee shall not be subject to removal except by the Board of Directors. The Chairman of the Audit Committee shall be recommended by the Nominating and Governance Committee for approval by the Board of Directors. The Audit Committee shall have such duties and may exercise such authority as may be prescribed by resolution of the Board of Directors and the Audit Committee Charter as adopted by resolution of the Board of Directors.

4.4 *The Compensation Committee.* The Compensation Committee shall consist of at least three directors, all of whom must be independent directors and all of whom shall be recommended by the Nominating and Governance Committee for approval by the Board of Directors. The exact number of Compensation Committee members shall be determined from time to time by the Board of Directors. Members of the Compensation Committee shall not be subject to removal except by the Board of Directors. The Chairman of the Compensation Committee shall be recommended by the Nominating and Governance Committee for approval by the Board of Directors. The Compensation Committee shall have such duties and may exercise such authority as may be prescribed by resolution of the Board of Directors and the Compensation Committee Charter as adopted by resolution of the Board of Directors.

4.5 *The Nominating and Governance Committee.* The Nominating and Governance Committee shall consist of at least five directors, all of whom must be independent directors and all of whom shall be recommended by the Nominating and Governance Committee for approval by the Board of Directors. The exact number of Nominating and Governance Committee members shall be determined from time to time by the Board of Directors. Members of the Nominating and Governance Committee shall not be subject to removal except by the Board of Directors. The Chairman of the Nominating and Governance Committee shall be recommended by the Nominating and Governance Committee for approval by the Board of Directors. The Nominating and Governance Committee shall have such duties and may exercise such authority as may be prescribed by resolution of the Board of Directors and the Nominating and Governance Committee Charter as adopted by resolution of the Board of Directors.

4.6 *Other.* All other committees shall have such duties and may exercise such authority as may be prescribed for them by the Board of Directors.

4.7 *Conduct of Proceedings.* Unless otherwise provided in the Certificate of Incorporation, these Bylaws, the charter of the committee or by the Board of Directors by resolution, each committee may determine the manner in which committee proceedings shall be conducted. In the absence of any such established procedures, each committee shall conduct its business in the same manner as the Board of Directors conducts its business pursuant to Article 3 of these Bylaws. Committees shall keep minutes of their meetings and periodically report their proceedings to the Board of Directors and appropriate committees of the Board of Directors to the extent requested by the Board of Directors or Board committee.

ARTICLE 5—OFFICERS

5.1 *Number and Election.* The officers of the Corporation shall be a Chief Executive Officer, a Chief Financial Officer, a President, one or more Vice-Presidents (the number thereof to be determined by the Board of Directors), a Secretary, a Treasurer, and such other officers as the Board of Directors may determine, including an Assistant Secretary or Assistant Treasurer. The Chief Executive Officer shall be appointed by an affirmative vote of the majority of the Board of Directors, and may, but need not be the Chairman of the Board. Such affirmative vote may also prescribe his duties not inconsistent with these Bylaws and may prescribe a tenure of office.

Two or more offices may be held by the same person, except the Chief Executive Officer may not also be the Secretary or Assistant Secretary and the President may not also be the Secretary or Assistant Secretary.

5.2 *Chief Executive Officer.* The Chief Executive Officer shall, subject to the direction of the Board of Directors, have general charge and supervision of the business of the Corporation. The Chief Executive Officer shall be the official representative of the Corporation in all public matters. The Chief Executive Officer shall perform such other duties and possess such other powers as the Board of Directors may from time to time prescribe and that are incident to the office of Chief Executive Officer. The Chief Executive Officer shall not engage in any other business during his incumbency except with approval of the Board of Directors, and by his acceptance of the office of Chief Executive Officer he shall be deemed to have agreed to uphold these Bylaws.

5.3 *President.* The President shall be the chief operating officer of the Corporation and shall perform such duties and possess such powers as the Board of Directors or the Chief Executive Officer may from time to time prescribe. In the event of the absence, inability or refusal to act of

the Chief Executive Officer, the President shall perform the officer duties of the Chief Executive Officer and, when so performing, shall have all the powers of and be subject to all the restrictions upon the office of Chief Executive Officer.

5.4 *Chief Financial Officer.* The Chief Financial Officer shall perform such duties and possess such powers as the Board of Directors or the Chief Executive Officer may from time to time prescribe. The Chief Financial Officer shall have the custody of the corporate funds and securities; shall keep full and accurate all books and accounts of the Corporation as shall be necessary or desirable in accordance with applicable law or generally accepted accounting principles; shall deposit all monies and other valuable effects in the name and to the credit of the Corporation as may be ordered by the Chief Executive Officer or the Board of Directors; shall cause the funds of the Corporation to be disbursed when such disbursements have been duly authorized, taking proper vouchers for such disbursements; and shall render to the Board of Directors, at its regular meeting or when the Board of Directors so requires, an account of the Corporation.

5.5 *Vice Presidents.* Vice Presidents shall perform the duties prescribed by the Board of Directors, the Chief Executive Officer or President.

5.6 *Secretary.* The Secretary shall attend all meetings of stockholders and of the Board of Directors; the Secretary shall keep official records of meetings of stockholders at which action is taken and of meetings of the Board of Directors; the Secretary shall, in person or by representative, perform like services for the standing and special committees when required; the Secretary shall give notice of meetings of stockholders and of special meetings of the Board of Directors in accordance with the provisions of these Bylaws or as required by statute; the Secretary shall be custodian of the books, records, and corporate seal of the Corporation and attest, upon behalf of the Corporation, all contracts and other documents requiring authentication; the Secretary shall perform such other duties as may be prescribed by the Board of Directors, the Chief Executive Officer or President.

5.7 *Treasurer.* The Treasurer shall perform such duties and possess such powers as the Board of Directors, the Chief Executive Officer or the Chief Financial Officer may from time to time prescribe.

5.8 *Qualification and Tenure.* No officer need be a stockholder of the Corporation. Except as otherwise provided by law, by the Certificate of Incorporation or by these Bylaws, each officer shall hold office until his successor is elected and qualified, unless a different term is specified in the vote choosing or appointing him or her, or until his earlier death, resignation or removal.

5.9 *Resignation.* Any officer may resign by delivering such officer's written resignation to the Corporation at its principal office or to the Chief Executive Officer or Secretary. Such resignation shall be effective upon receipt unless it is specified to be effective at some other time or upon the happening of some other event.

5.10 *Removals.* Any officer appointed by the Board of Directors may be removed at any time by the Board of Directors, the Chief Executive Officer or the President; provided that the Chief Executive Officer can only be removed by the Board of Directors. Any such removal shall be without prejudice to the contract rights, if any, of the person so removed.

5.11 *Vacancies.* The Board of Directors may fill any vacancy occurring in any office for any reason and may, in its discretion, leave unfilled for such period as it may determine any offices

other than those of Chief Executive Officer, President, Secretary and Treasurer. Any vacancies occurring in any office of the Corporation at any time also may be filled by an officer authorized by the Board of Directors to appoint a person to hold such office. Each such successor, however appointed, shall hold office until such officer's successor is elected and qualified, or until such officer's earlier death, resignation or removal.

5.12 *Salaries.* Officers of the Corporation shall be entitled to such salaries, compensation or reimbursement as shall be fixed or allowed from time to time by the Board of Directors unless otherwise delegated to the Compensation Committee of the Board of Directors or to members of senior management. No officer shall be prevented from receiving such salary by reason of the fact that the officer is also a director of the Corporation.

ARTICLE 6—CAPITAL STOCK

6.1 *Issuance of Stock.* Subject to the provisions of the Certificate of Incorporation, the whole or any part of any unissued balance of the authorized capital stock of the Corporation or the whole or any part of any unissued balance of the authorized capital stock of the Corporation held in its treasury may be issued, sold, transferred or otherwise disposed of by vote of the Board of Directors in such manner, for such consideration and on such terms as the Board of Directors may determine.

6.2 *Certificates of Stock.* (a) The shares of stock in the Corporation shall be represented by certificates; provided that the Board of Directors may provide by resolution or resolutions that some or all of any or all classes or series of its stock shall be uncertificated shares. Any such resolution shall not apply to any such shares represented by a certificate theretofore issued until such certificate is surrendered to the Corporation. If shares of stock in the Corporation are certificated, any signature on such certificates may be a facsimile. In case any officer, transfer agent or registrar who has signed or whose facsimile signature has been placed upon a certificate shall have ceased to be such officer, transfer agent or registrar before such certificate is issued, it may be issued by the Corporation with the same effect as if such person were such officer, transfer agent or registrar at the date of issue.

(b) Certificates representing shares of stock of the Corporation may bear such legends regarding restrictions on transfer or other matters as any officer or officers of the Corporation may determine to be appropriate and lawful. If the Corporation is authorized to issue more than one class of stock or more than one series of any class, the powers, designations, preferences and relative, participating, optional or other special rights of each class of stock or series thereof and the qualifications or restrictions of such preferences and/or rights shall be set forth in full or summarized on the face or back of the certificate, if such shares are represented by certificates, which the Corporation shall issue to represent such class or series of stock, provided that, except as otherwise required by law, in lieu of the foregoing requirements, there may be set forth on the face or back of the certificate which the Corporation shall issue to represent such class or series of stock a statement that the Corporation will furnish without charge to each stockholder who so requests the powers, designations, preferences and relative, participating, optional or other special rights of such class or series of stock and the qualifications, limitations or restrictions of such preferences and/or rights. Within a reasonable time after the issuance or transfer of uncertificated shares of any class or series of stock, the Corporation shall send to the registered owner thereof a written notice containing the information required by law to be set forth or stated on certificates representing shares of such class or series or a statement that the Corporation will furnish without

charge to each stockholder who so requests the powers, designations, preferences and relative, participating, optional or other special rights of such class or series and the qualifications, limitations or restrictions of such preferences and/or rights. Except as otherwise expressly provided by law, the rights and obligations of the holders of uncertificated shares and the rights and obligations of the holders of certificates representing stock of the same class and series shall be identical.

6.3 *Transfers.* The shares of stock of the Corporation represented by certificates shall be transferable only upon the Corporation's books by the holders thereof in person or by their duly authorized attorneys or legal representatives, and upon such transfer the old certificates shall be surrendered to the Corporation by the delivery thereof to the person in charge of the stock and transfer books and ledgers, or to such other person as the Board of Directors may designate, by whom they shall be cancelled, and new certificates or uncertificated shares shall thereupon be issued. A record shall be made of each transfer and whenever a transfer shall be made for collateral security, and not absolutely, it shall be so expressed in the entry of the transfer. Uncertificated shares of stock of the Corporation shall be transferable only upon the Corporation's books by the holders thereof in person or by their duly authorized attorneys and legal representatives upon receipt by the Corporation or its transfer agent of proper transfer instructions from the registered owner of such uncertificated shares or such holder's duly authorized attorneys and legal representatives, and upon receipt of proper transfer instructions such uncertificated shares shall be canceled, new uncertificated shares or certificates representing shares shall be issued to the person entitled thereto and the transaction shall be recorded upon the books of the Corporation.

6.4 *Lost, Stolen or Destroyed Certificates.* The Corporation may issue a new certificate, certificates or uncertificated shares of stock in place of any previously issued certificate alleged to have been lost, stolen or destroyed, upon such terms and conditions as the Corporation may prescribe, including the presentation of reasonable evidence of such loss, theft or destruction and the giving of such indemnity as the Corporation may require for the protection of the Corporation or any transfer agent or registrar.

6.5 *Fixing Date for Determination of Stockholders of Record.* (a) In order that the Corporation may determine the stockholders entitled to notice of any meeting of stockholders or any adjournment thereof, the Board of Directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the Board of Directors, and which record date shall, unless otherwise required by law, not be more than sixty (60) nor less than ten (10) days before the date of such meeting. If the Board of Directors so fixes a date, such date shall also be the record date for determining the stockholders entitled to vote at such meeting unless the Board of Directors determines, at the time it fixes such record date, that a later date on or before the date of the meeting shall be the date for determining stockholders entitled to vote at such meeting. If no record date is fixed by the Board of Directors, the record date for determining stockholders entitled to notice of and to vote at a meeting of stockholders shall be at the close of business on the day next preceding the day on which notice of the meeting is given, or, if notice is waived, at the close of business on the day next preceding the day on which the meeting is held. A determination of stockholders of record entitled to notice of or to vote at a meeting of stockholders shall apply to any adjournment of the meeting; provided, however, that the Board of Directors may fix a new record date for the determination of stockholders entitled to vote at the adjourned meeting, and in such case shall also fix as the record date for stockholders

entitled to notice of such adjourned meeting the same or an earlier date as that fixed for determination of stockholders entitled to vote in accordance herewith at the adjourned meeting.

(b) In order that the Corporation may determine the stockholders entitled to receive payment of any dividend or other distribution or allotment of any rights, or entitled to exercise any rights in respect of any change, conversion or exchange of stock or for the purpose of any other lawful action, the Board of Directors may fix a record date, which shall not be more than sixty (60) days prior to such other action. If no such record date is fixed, the record date for determining stockholders for any such purpose shall be at the close of business on the day on which the Board of Directors adopts the resolution relating thereto.

6.6 *Dividends.* Subject to limitations contained in the DGCL, the Certificate of Incorporation and these Bylaws, the Board of Directors may declare and pay dividends upon the shares of capital stock of the Corporation, which dividends may be paid either in cash, in property or in shares of the capital stock of the Corporation.

ARTICLE 7—RESERVED

ARTICLE 8—NOTICES

8.1 *Notices.* Except as provided in *Section 8.2* and to the extent permitted by law, any notice required to be given by these Bylaws or otherwise shall be deemed to have been given:

(a) in person upon delivery of the notice in person to the person to whom such notice is addressed;

(b) by mail upon deposit of the notice in the United States mail, enclosed in a postage prepaid envelope;

(c) by messenger or overnight courier service upon provision of the notice to the messenger or courier service, provided that the delivery method does not require payment of the messenger or courier service fee to deliver the notice by the person to whom the notice is addressed;

(d) by facsimile machine upon acknowledgment by the facsimile machine used to transmit the notice of the successful transmission of the notice;

(e) by electronic mail upon electronic transmission of the notice; and

(f) by telephone when received.

Any such notice must be addressed to its intended recipient at the intended recipient's address (including the intended recipient's business or residence address, facsimile number, electronic address, or telephone number, as applicable) as it appears on the books and records of the Corporation, or if no address appears on such books and records, then at such address as shall be otherwise known to the Secretary. In the event that a notice is not provided in conformity with the provisions of this *Section 8.1*, the notice will be deemed to have been given to its intended recipient upon any receipt of the notice by its intended recipient.

8.2 *Electronic Notice.* Whenever any notice whatsoever is required to be given in writing to any stockholder by law, by the Certificate of Incorporation or by these Bylaws, such notice may be given by a form of electronic transmission if the stockholder to whom such notice is given has previously consented to the receipt of notice by electronic transmission.

8.3 *Waiver of Notice.* Whenever notice is required to be given under the provisions of any statute, the Certificate of Incorporation, these Bylaws, or otherwise, a waiver thereof, given by the person entitled to notice, or his proxy in the case of a stockholder, whether before or after the time stated therein shall be deemed equivalent to notice. Except as may be otherwise specifically provided by statute, any waiver by mail, messenger, overnight courier, facsimile machine, or electronic mail, bearing the name of the person entitled to notice shall be deemed a waiver duly given. Attendance of a person at a meeting, including attendance by proxy in the case of a stockholder, shall constitute a waiver of notice of such meeting except when the person attends a meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business the meeting is not lawfully called or convened. Except as required by statute or the Certificate of Incorporation, neither the business to be transacted at, nor the purpose of, any regular or special meeting of the stockholders, directors or any committee need be specified in any waiver of notice.

ARTICLE 9—GENERAL PROVISIONS

9.1 *Fiscal Year.* Except as from time to time otherwise designated by the Board of Directors, the fiscal year of the Corporation ends on the close of business on December 31 of each year.

9.2 *Corporate Seal.* The corporate seal, if any, shall be in such form as shall be approved by the Board of Directors or an officer of the Corporation.

9.3 *Voting of Securities.* Except as the Board of Directors may otherwise designate, the Chief Executive Officer, Chief Financial Officer or Treasurer may waive notice of, and act as, or appoint any person or persons to act as, proxy or attorney-in-fact for the Corporation (with or without power of substitution) at, any meeting of stockholders or shareholders or equity owners of any other corporation, organization or entity, the securities of which may be held by the Corporation.

9.4 *Evidence of Authority.* A certificate by the Secretary, or Assistant Secretary, as to any action taken by the stockholders, Board of Directors, a committee or any officer or representative of the Corporation shall, as to all persons who rely on the certificate in good faith, be conclusive evidence of such action.

9.5 *Certificate of Incorporation.* All references in these Bylaws to the Certificate of Incorporation shall be deemed to refer to the Certificate of Incorporation of the Corporation, as amended, altered or restated and in effect from time to time.

9.6 *Transactions with Interested Parties.* No contract or transaction between the Corporation and one or more of the directors or officers, or between the Corporation and any other corporation, limited liability company, partnership, association or other organization in which one or more of the directors or officers are directors, managers or officers, or have a financial interest, shall be void or voidable solely for this reason, or solely because the director, manager or officer is present at or participates in the meeting of the Board of Directors or a committee of the Board of Directors which authorizes the contract or transaction or solely because his, her or their votes are counted for such purpose, if:

(1) The material facts as to his, her or their relationship or interest and as to the contract or transaction are disclosed or are known to the Board of Directors or the committee, and the Board of Directors or committee in good faith authorizes the contract or transaction by the affirmative

votes of a majority of the disinterested directors, even though the disinterested directors be less than a quorum;

(2) The material facts as to his, her or their relationship or interest and as to the contract or transaction are disclosed or are known to the stockholders entitled to vote thereon, and the contract or transaction is specifically approved in good faith by vote of the stockholders; or

(3) The contract or transaction is fair as to the Corporation as of the time it is authorized, approved or ratified by the Board of Directors, a committee of the Board of Directors or the stockholders.

Common or interested directors may be counted in determining the presence of a quorum at a meeting of the Board of Directors or of a committee at which the contract or transaction is authorized.

9.7 Severability. Any determination that any provision of these Bylaws is for any reason inapplicable, illegal or ineffective shall not affect or invalidate any other provision of these Bylaws.

9.8 Pronouns. All pronouns used in these Bylaws shall be deemed to refer to the masculine, feminine or neuter, singular or plural, as the identity of the person or persons may require.

9.9 Contracts. In addition to the powers otherwise granted to officers pursuant to Article 5 hereof, the Board of Directors may authorize any officer or officers, or any agent or agents, of the Corporation to enter into any contract or to execute and deliver any instrument in the name of and on behalf of the Corporation, and such authority may be general or confined to specific instances.

9.10 Loans. The Corporation may, to the extent permitted by applicable law, lend money to, or guarantee any obligation of, or otherwise assist any officer or other employee of the Corporation or of its subsidiaries, including any officer or employee who is a director of the Corporation or its subsidiaries, whenever, in the judgment of the directors, such loan, guaranty or assistance may reasonably be expected to benefit the Corporation. The loan, guaranty or other assistance may be with or without interest, and may be unsecured, or secured in such manner as the Board of Directors shall approve, including, without limitation, a pledge of shares of stock of the Corporation. Nothing in this *Section 9.10* shall be deemed to deny, limit or restrict the powers of guaranty or warranty of the Corporation at common law or under any statute.

9.11 Records. The Certificate of Incorporation, Bylaws and the proceedings of all meetings of the stockholders, the Board of Directors, the Executive Committee and any other committee of the Board of Directors shall be recorded in appropriate minute books provided for this purpose or in any other information storage device (whether in paper or electronic form), provided that the records so kept can be converted into clearly legible form within a reasonable time. The Corporation shall so convert any such records so kept upon the request of any person entitled to inspect the same.

9.12 Section Headings. Section headings in these Bylaws are for convenience of reference only and shall not be given any substantive effect in limiting or otherwise construing any provision herein.

9.13 Inconsistent Provisions. In the event that any provision of these Bylaws is or becomes inconsistent with any provision of the Certificate of Incorporation, the DGCL or any other

applicable law, the provision of these Bylaws shall not be given any effect to the extent of such inconsistency but shall otherwise be given full force and effect.

ARTICLE 10—AMENDMENTS

10.1 *Amendment.* These Bylaws may be amended, altered or repealed, and new Bylaws may be adopted at any time, by the Board of Directors. Stockholders of the Corporation may alter, amend or repeal any Bylaw; provided, that in addition to any vote of the holders of any class or series of stock of the Corporation required by law or the Certificate of Incorporation, the affirmative vote of the holders of a majority of the votes entitled to be cast by the holders of the then-outstanding shares of capital stock of the Corporation entitled to vote generally in the election of directors, voting together as a single class, shall be required for the stockholders to adopt, alter, amend or repeal any provision of these Bylaws.

10.2 *Submission to Boards of any Regulated Securities Exchange Subsidiary.* Notwithstanding *Section 10.1*, for so long as the Corporation shall control, directly or indirectly, any national securities exchange (a “Regulated Securities Exchange Subsidiary”), before any amendment, alteration or repeal of any provision of these Bylaws shall be effective, such amendment, alteration or repeal shall be submitted to the board of directors of each Regulated Securities Exchange Subsidiary, and if such amendment, alteration or repeal must be filed with or filed with and approved by the Securities and Exchange Commission, then such amendment, alteration or repeal shall not become effective until filed with or filed with and approved by the Securities and Exchange Commission, as the case may be.

ARTICLE 11—FORUM FOR ADJUDICATION OF DISPUTES

Unless the Corporation consents in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware shall, to the fullest extent permitted by law, be the sole and exclusive forum for (i) any derivative action or proceeding brought on behalf of the Corporation, (ii) any action asserting a claim of breach of a fiduciary duty owed by any director, officer, other employee or stockholder of the Corporation to the Corporation or the Corporation’s stockholders, (iii) any action asserting a claim arising pursuant to any provision of the DGCL or as to which the DGCL confers jurisdiction on the Court of Chancery of the State of Delaware, or (iv) any action asserting a claim governed by the internal affairs doctrine.

V Cboe C2 Exchange, Inc.

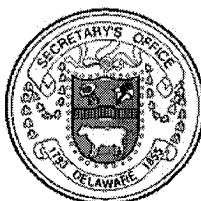
Delaware

The First State

Page 1

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE RESTATED CERTIFICATE OF "C2 OPTIONS EXCHANGE, INCORPORATED", CHANGING ITS NAME FROM "C2 OPTIONS EXCHANGE, INCORPORATED" TO "CBOE C2 EXCHANGE, INC.", FILED IN THIS OFFICE ON THE SIXTEENTH DAY OF OCTOBER, A.D. 2017, AT 10:07 O'CLOCK P.M.

A FILED COPY OF THIS CERTIFICATE HAS BEEN FORWARDED TO THE NEW CASTLE COUNTY RECORDER OF DEEDS.



4648009 8100
SR# 20176643027

You may verify this certificate online at corp.delaware.gov/authver.shtml

A handwritten signature in black ink, appearing to read "JB", is written over a horizontal line. Below the line, the text "Jeffrey W. Bullock, Secretary of State" is printed.

Jeffrey W. Bullock, Secretary of State

Authentication: 203408783
Date: 10-17-17

**FIFTH AMENDED AND RESTATED
CERTIFICATE OF INCORPORATION
of
C2 OPTIONS EXCHANGE, INCORPORATED**

C2 Options Exchange, Incorporated, a corporation organized under the laws of the State of Delaware (the "Corporation"), hereby certifies as follows:

1. The Corporation was incorporated on July 21, 2009.
2. This Fifth Amended and Restated Certificate of Incorporation has been duly adopted in accordance with Section 242 and Section 245 of the General Corporation Law of the State of Delaware (the "GCL") and by the written consent of its sole stockholder in accordance with Section 228 of the GCL. This Fifth Amended and Restated Certificate of Incorporation restates, integrates and further amends the provisions of the Fourth Amended and Restated Certificate of Incorporation of the Corporation.
3. The text of the Fifth Amended and Restated Certificate of Incorporation as amended and restated shall read in full as follows:

FIRST: The name of the corporation is Cboe C2 Exchange, Inc.

SECOND: The address of the registered office of the Corporation in the State of Delaware is Corporation Trust Center, 1209 Orange Street, in the City of Wilmington, County of New Castle, Delaware 19801-1297. The name of the Corporation's registered agent at such address shall be The Corporation Trust Company.

THIRD: The nature of the business or purposes to be conducted or promoted by the Corporation is:

(a) To conduct and carry on the function of an "exchange" within the meaning of that term in the Securities Exchange Act of 1934, as amended (the "Act");

(b) To provide a securities market place with high standards of honor and integrity among its Trading Permit Holders and other persons holding rights to access the Corporation's facilities and to promote and maintain just and equitable principles of trade and business. The term "Trading Permit Holders" shall have the meaning given to that term in Section 1.1 of the Corporation's Bylaws, as the same may be amended from time to time (the "Corporation's Bylaws"); and

(c) To engage in any other lawful act or activity for which corporations may be organized under the GCL.

FOURTH: The total number of shares of stock which the Corporation shall have authority to issue is one thousand (1,000) shares of common stock having a par value of \$0.01 per share (the "Common Stock"). Cboe Global Markets, Inc. ("Cboe") will be the sole owner of the Common Stock. Any sale, transfer or assignment by Cboe of any shares of Common Stock will

be subject to prior approval by the Securities and Exchange Commission (the "Commission") pursuant to the rule filing procedure under Section 19 of the Act.

FIFTH: (a) The governing body of the Corporation shall be its Board of Directors. The business and affairs of the Corporation shall be managed by or under the direction of the Board of Directors.

(b) The Board of Directors of the Corporation shall consist of not less than 5 directors, the exact number to be fixed in accordance with the Corporation's Bylaws.

(c) Only persons who are nominated by the Nominating and Governance Committee shall be eligible for election as directors. The Nominating and Governance Committee shall be bound to accept and nominate (a) the individual(s) recommended by the Representative Director Nominating Body (as defined in the Corporation's Bylaws) for nomination as Representative Director (as defined in the Corporation's Bylaws), provided that the individuals so nominated by the Representative Director Nominating Body are not opposed by a petition candidate or (b) the individual(s) who receive the most votes pursuant to a petition election as set forth in Section 3.2 of the Corporation's Bylaws; provided, however, that any individual(s) recommended by the Representative Director Nominating Body and any individual(s) who are petition candidates pursuant to clause (b) of the preceding sentence shall satisfy the compositional requirements determined by the Board of Directors from time to time pursuant to a resolution adopted by the Board in accordance with Section 3.1 of the Corporation's Bylaws, designating the number of Representative Directors that are Non-Industry Directors and Industry Directors (if any), as such terms are defined in the Corporation's Bylaws; and provided further, that the Board of Directors and/or Nominating and Governance Committee, as applicable, shall make such determinations as to whether a director candidate satisfies applicable qualifications for election as a director pursuant to and in accordance with Section 3.1 of the Corporation's Bylaws.

(d) In discharging his or her responsibilities as a member of the Board of Directors, and to the fullest extent permitted by law, each director shall take into consideration the effect that his or her actions would have on the ability of the Corporation to carry out the Corporation's responsibilities under the Act and on the ability of the Corporation: to engage in conduct that fosters and does not interfere with the Corporation's ability to prevent fraudulent and manipulative acts and practices; to promote just and equitable principles of trade; to foster cooperation and coordination with persons engaged in regulating, clearing, settling, processing information with respect to, and facilitating transactions in securities; to remove impediments to and perfect the mechanisms of a free and open market and a national market system; and, in general, to protect investors and the public interest. In discharging his or her responsibilities as a member of the Board of Directors or as an officer or employee of the Corporation, each such director, officer or employee shall comply with the federal securities laws and the rules and regulations thereunder and shall cooperate with the Commission, and the Corporation pursuant to its regulatory authority.

SIXTH: (a) The Corporation shall, to the fullest extent permitted by applicable law as it presently exists or may hereafter be amended, indemnify and hold harmless any person (a "Covered Person") who was or is made or is threatened to be made a party or is otherwise involved in any threatened, pending or completed action, suit or proceeding, whether civil,

criminal, administrative or investigative (a "proceeding"), by reason of the fact that he or she is or was a director, officer or member of a committee of the Corporation, or, while a director or officer of the Corporation, is or was serving at the request of the Corporation as a director or officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise or non-profit entity, including service with respect to employee benefit plans, against all liability and loss suffered and expenses (including attorneys' fees), judgment, fines and amounts paid in settlement actually and reasonably incurred by such Covered Person in connection with a proceeding. Notwithstanding the preceding sentence, except as otherwise provided in Section (c) of this Article Sixth, the Corporation shall be required to indemnify a Covered Person in connection with a proceeding (or part thereof) commenced by such Covered Person only if the commencement of such proceeding (or part thereof) by the Covered Person was authorized in the specific case by the Board of Directors of the Corporation.

(b) Expenses (including attorneys' fees) incurred by a Covered Person in defending a proceeding, including appeals, shall, to the extent not prohibited by law, be paid by the Corporation in advance of the final disposition of such proceeding; provided, however, that the Corporation shall not be required to advance any expenses to a person against whom the Corporation directly brings an action, suit or proceeding alleging that such person (1) committed an act or omission not in good faith or (2) committed an act of intentional misconduct or a knowing violation of law. Additionally, an advancement of expenses incurred by a Covered Person shall be made only upon delivery to the Corporation of an undertaking, by or on behalf of such Covered Person, to repay all amounts so advanced if it shall ultimately be determined by final judicial decision from which there is no further right to appeal or otherwise in accordance with Delaware law that such Covered Person is not entitled to be indemnified for such expenses under this Article Sixth.

(c) If a claim for indemnification (following the final disposition of such action, suit or proceeding) or advancement of expenses under this Article Sixth is not paid in full within thirty days after a written claim therefor by the Covered Person has been received by the Corporation, the Covered Person may file suit to recover the unpaid amount of such claim and, if successful in whole or in part, shall be entitled to be paid the expense of prosecuting such claim to the fullest extent permitted by law. In any action the Corporation shall have the burden of proving that the Covered Person is not entitled to the requested indemnification or advancement of expenses under applicable law.

(d) The provisions of this Article Sixth shall be deemed to be a contract between the Corporation and each Covered Person who serves in any such capacity at any time while this Article Sixth is in effect, and any repeal or modification of any applicable law or of this Article Sixth shall not affect any rights or obligations then existing with respect to any state of facts then or theretofore existing or any action, suit or proceeding theretofore or thereafter brought or threatened based in whole or in part upon any such state of facts.

(e) Persons not expressly covered by the foregoing provisions of this Article Sixth, such as those (x) who are or were employees or agents of the Corporation, or are or were serving at the request of the Corporation as employees or agents of another corporation, partnership, joint venture, trust or other enterprise, or (y) who are or were directors, officers, employees or agents of a constituent corporation absorbed in a consolidation or merger in which the Corporation was

the resulting or surviving corporation, or who are or were serving at the request of such constituent corporation as directors, officers, employees or agents of another corporation, partnership, joint venture, trust or other enterprise, may be indemnified or advanced expenses to the extent authorized at any time or from time to time by the Board of Directors.

(f) The rights conferred on any Covered Person by this Article Sixth shall not be deemed exclusive of any other rights to which such Covered Person may be entitled by law or otherwise, and shall continue as to a person who has ceased to be a director, officer, employee or agent and shall inure to the benefit of the heirs, executors and administrators of such person.

(g) The Corporation's obligation, if any, to indemnify or to advance expenses to any Covered Person who was or is serving at its request as a director, officer, employee or agent of another corporation, partnership, joint venture, trust, enterprise or nonprofit entity shall be reduced by any amount such Covered Person may collect as indemnification or advancement of expenses from such other corporation, partnership, joint venture, trust, enterprise or non-profit entity.

(h) Any repeal or modification of the foregoing provisions of this Article Sixth shall not adversely affect any right or protection hereunder of any Covered Person in respect of any act or omission occurring prior to the time of such repeal or modification.

(i) The Corporation may purchase and maintain insurance, at its expense, to protect itself and any director, manager, officer, trustee, employee or agent of the Corporation or another corporation, or of a partnership, limited liability company, joint venture, trust or other enterprise against any expense, liability or loss (as such terms are used in this Article Sixth), whether or not the Corporation would have the power to indemnify such person against such expense, liability or loss under the GCL.

SEVENTH: The Corporation reserves the right to amend this Certificate of Incorporation, and to change or repeal any provision of this Certificate of Incorporation, in the manner prescribed at the time by statute, and all rights conferred upon stockholders by this Certificate of Incorporation are granted subject to this reservation. Before any amendment to, or repeal of, any provision of this Certificate of Incorporation shall be effective, those changes shall be submitted to the Board of Directors of the Corporation and if such amendment or repeal must be filed with or filed with and approved by the Commission, then the proposed changes to this Certificate of Incorporation shall not become effective until filed with or filed with and approved by the Commission, as the case may be.

EIGHTH: A director of the Corporation shall not be liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director, except to the extent such exemption from liability or limitation thereof is not permitted under the GCL as the same exists or may hereafter be amended. Any amendment, modification or repeal of the foregoing sentence shall not adversely affect any right or protection of a director of the Corporation hereunder in respect of any act or omission occurring prior to the time of such amendment, modification or repeal.

NINTH: Unless and except to the extent that the Corporation's Bylaws shall so require, the election of directors of the Corporation need not be by written ballot.

TENTH: In furtherance and not in limitation of the powers conferred by the laws of the State of Delaware, the Board of Directors of the Corporation is expressly authorized to make, alter and repeal the Corporation's Bylaws.

ELEVENTH: To the fullest extent permitted by law, all confidential information pertaining to the self-regulatory function of the Corporation (including but not limited to disciplinary matters, trading data, trading practices and audit information) contained in the books and records of the Corporation shall: (i) not be made available to any persons other than to those officers, directors, employees and agents of the Corporation that have a reasonable need to know the contents thereof; (ii) be retained in confidence by the Corporation and the officers, directors, employees and agents of the Corporation; and (iii) not be used for any commercial purposes. Nothing in this Article Eleventh shall be interpreted as to limit or impede the rights of the Commission to access and examine such confidential information pursuant to the federal securities laws and the rules and regulations thereunder, or to limit or impede the ability of any officers, directors, employees or agents of the Corporation to disclose such confidential information to the Commission.

IN WITNESS WHEREOF, C2 Options Exchange, Incorporated has caused this certificate to be signed as of this 16th day of October, 2017.

C2 OPTIONS EXCHANGE, INCORPORATED

By:

Name: Edward T. Tilly

Its: Chief Executive Officer

NINTH AMENDED AND RESTATED BYLAWS OF

CBOE C2 EXCHANGE, INC.

ARTICLE I Definitions

Section 1.1. Definitions.

When used in these Bylaws, except as expressly otherwise provided or unless the context otherwise requires:

- (a) The term “Act” means the Securities Exchange Act of 1934, as amended.
- (b) The term “affiliate” of a Person or “affiliated with” another Person shall have the meaning given to such term in the Rules of the Exchange.
- (c) The term “Board” means the Board of Directors of the Corporation.
- (d) The term “Corporation” means Cboe C2 Exchange, Inc.
- (e) The term “Exchange” means the Corporation, its exchange market and any facilities thereof.
- (f) The term “Trading Permit Holder” means any individual, corporation, partnership, limited liability company or other entity authorized by the Rules that holds a Trading Permit. If a Trading Permit Holder is an individual, the Trading Permit Holder may also be referred to as an “individual Trading Permit Holder.” If a Trading Permit Holder is not an individual, the Trading Permit Holder may also be referred to as a “TPH organization.” A Trading Permit Holder is a “member” solely for purposes of the Act; however, one’s status as a Trading Permit Holder does not confer on that Person any ownership interest in the Exchange.
- (g) The term “Person” shall mean an individual, partnership (general or limited), joint stock company, corporation, limited liability company, trust or unincorporated organization, or any governmental entity or agency or political subdivision thereof.
- (h) The term “Rules” means the rules of the Exchange as adopted or amended from time to time.
- (i) The term “Trading Permit” shall have the meaning given to such term in the Rules of the Exchange.
- (j) The term “associated with an entity” means any partner, officer or director of such entity (or any person occupying a similar status or performing similar functions), any person directly or indirectly controlling, controlled by, or under common control with such entity, or any employee of such entity.
- (k) The term “Representative Director Nominating Body” shall mean the Industry-Director Subcommittee of the Nominating and Governance Committee if there are at least two Industry Directors on the Nominating and Governance Committee. If the Nominating and Governance Committee has less than two Industry Directors, then the “Representative Director Nominating Body” shall mean the Trading Permit Holders Subcommittee of the Advisory Board.

ARTICLE II Stockholders

Section 2.1. Place of Meetings.

All meetings of stockholders shall be held at such place within or without the State of Delaware as may be designated from time to time by the Board or the Chairman of the Board (or, if there is no Chairman of the Board, the Chief Executive Officer) or, if not so designated, at the principal place of business of the Corporation in Chicago, Illinois.

Section 2.2. Annual Meetings.

If required by applicable law, an annual meeting of stockholders shall be held on the third Tuesday in May of each year or such other date as may be fixed by the Board, at such time as may be designated by the Secretary prior to the giving of notice of the meeting, for the purpose of electing directors to fill expiring terms and any vacancies in unexpired terms and for the transaction of business as may properly come before the meeting. In no event shall the annual meeting date each year be prior to the completion of the process for the nomination of the Representative Directors for that annual meeting as set forth in Sections 3.1 and 3.2.

Section 2.3. Special Meetings.

Special meetings of stockholders, for any purpose or purposes, unless otherwise prescribed by statute or by the Certificate of Incorporation of the Corporation, may be called by the Chairman of the Board or by a majority of the Board.

Section 2.4. Notice of Stockholders' Meetings.

Unless otherwise prescribed by statute or the Certificate of Incorporation, notice of each meeting of stockholders, stating the date, time and place thereof, and, in the case of special meetings, the purpose or purposes for which such meeting is called, shall be given to each stockholder of record entitled to vote thereat not more than 60 days and at least 10 days before the date of the meeting.

Section 2.5 Quorum and Adjournments.

Except as otherwise provided by statute or the Certificate of Incorporation, a majority of the outstanding stock of the Corporation entitled to vote at the meeting, when present in person or represented by proxy, shall constitute a quorum at all meetings of stockholders for the transaction of business. If such quorum shall not be present or represented by proxy at any meeting of stockholders, holders of a majority of the stock present in person or represented by proxy at the meeting shall have power to adjourn the meeting from time to time, without notice other than announcement at the meeting unless otherwise required by statute, until a quorum shall be present or represented. At any such adjourned meeting at which a quorum is present, any business may be transacted which might have been transacted at the meeting as originally notified. Nothing in these Bylaws shall affect the right to adjourn a meeting from time to time where a quorum is present.

Section 2.6. Voting by Stockholders.

With respect to any question brought before a meeting, when a quorum is present, a majority of the votes properly cast on any question shall decide the question, unless the question is one

upon which by express provision of statute or the Certificate of Incorporation, a different vote is required, in which case such express provision shall govern and control. Notwithstanding the preceding sentence, a plurality of votes properly cast shall elect the directors.

Section 2.7. Determination of Stockholders of Record.

(a) The Board may fix a record date to determine the stockholders entitled to notice of and to vote at a meeting of stockholders or any adjournment thereof ("Record Date"). The Record Date shall not be more than 60 days nor less than 10 days before the date of the meeting.

(b) If no Record Date is fixed by the Board for a meeting of stockholders, the Record Date for the meeting shall be at the close of business on the day preceding the date on which notice of the meeting is given by the Corporation.

(c) A Record Date shall apply to any adjournment of a meeting of stockholders; provided, however, that the Board may fix a new Record Date for the adjourned meeting.

Section 2.8. Action by Written Consent of Stockholders.

Unless otherwise restricted by the Certificate of Incorporation, any corporate action upon which a vote of stockholders is required or permitted may be taken without a meeting, without prior notice and without a vote, if a consent in writing, setting forth the action so taken, shall be signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote on that matter were present and voted and shall be delivered to the Corporation in the manner required by law at its registered office within the State of Delaware or at its principal place of business or to an officer or agent of the Corporation having custody of the book in which proceedings of meetings of stockholders of the Corporation are recorded. Every written consent shall bear the date of signature of each stockholder who signs the consent and no written consent shall be effective to take the corporate action referred to in the consent unless, within 60 days of the earliest dated consent delivered to the Corporation, written consents signed by a sufficient number of holders to take action are delivered to the Corporation as required by these Bylaws or by applicable law. Prompt notice of the taking of the corporate action without a meeting by less than unanimous written consent shall be given to those stockholders who have not so consented in writing.

ARTICLE III Board of Directors

Section 3.1. Number, Election and Term of Office of Directors.

The Board shall consist of not less than 5 directors. The Board shall determine from time to time pursuant to resolution adopted by the Board the total number of directors, the number of Non-Industry Directors and Industry Directors (if any), and the number of Representative Directors that are Non-Industry Directors and Industry Directors (if any). In no event shall the number of Non-Industry Directors constitute less than the number of Industry Directors (excluding the Chief Executive Officer from the calculation of Industry Directors for such purpose). In addition, at all times at least 20% of directors serving on the Board shall be Representative Directors nominated (or otherwise selected through the petition process) as provided for in Section 3.2 by the Representative Director Nominating Body.

A “Non-Industry Director” is a person who is not an Industry Director.

An “Industry Director” is any director who (i) is a holder of a Trading Permit or otherwise subject to regulation by the Exchange; (ii) is a broker-dealer or an officer, director or employee of a broker-dealer or has been in any such capacity within the prior three years; (iii) is, or was within the prior three years, associated with an entity that is affiliated with a broker-dealer whose revenues account for a material portion of the consolidated revenues of the entities with which the broker-dealer is affiliated; (iv) has a material ownership interest in a broker-dealer and has investments in broker-dealers that account for a material portion of the director's net worth; (v) has a consulting or employment relationship with or has provided professional services to the Exchange or any of its affiliates or has had such a relationship or has provided such services within the prior three years; or (vi) provides, or has provided within the prior three years, professional or consulting services to a broker-dealer, or to an entity with a 50% or greater ownership interest in a broker-dealer whose revenues account for a material portion of the consolidated revenues of the entities with which the broker-dealer is affiliated, and the revenue from all such professional or consulting services accounts for a material portion of either the revenues received by the director or the revenues received by the director's firm or partnership.

Notwithstanding the foregoing, a director shall not be deemed to be an “Industry Director” solely because either (A) the person is or was within the prior three years an outside director of a broker-dealer or an outside director of an entity that is affiliated with a broker-dealer, provided that the broker-dealer is not a holder of a Trading Permit or otherwise subject to regulation by the Exchange, or (B) the person is or was within the prior three years associated with an entity that is affiliated with a broker-dealer whose revenues do not account for a material portion of the consolidated revenues of the entities with which the broker-dealer is affiliated, provided that the broker-dealer is not a holder of a Trading Permit or otherwise subject to regulation by the Exchange. At all times, at least one Non-Industry Director shall be a Non-Industry Director exclusive of the exceptions provided for in the immediately preceding sentence and shall have no material business relationship with a broker or dealer or the Exchange or any of its affiliates. For purposes of this Section 3.1, the term “outside director” shall mean a director of an entity who is not an employee or officer (or any person occupying a similar status or performing similar functions) of such entity.

The Board of Directors of the Exchange or the Nominating and Governance Committee of the Board shall make all materiality determinations under the foregoing two paragraphs. A director shall qualify as a Non-Industry Director only so long as such director meets the requirements for that position.

Directors will serve one-year terms ending on the annual meeting following the meeting at which such directors were elected or at such time as their successors are elected or appointed and qualified, except in the event of earlier death, resignation, disqualification or removal.

Only persons who are nominated as Representative Directors by the Nominating and Governance Committee shall be eligible for election as Representative Directors. The Nominating and Governance Committee shall be bound to accept and nominate the Representative Director nominees recommended by the Representative Director Nominating Body, provided that the Representative Director nominees are not opposed by a petition candidate as forth in Section 3.2 below. If such Representative Director nominees are opposed by a petition candidate then the Nominating and Governance Committee shall be bound to accept

and nominate the Representative Director nominees who receive the most votes pursuant to a Run-off Election as set forth in Section 3.2 below.

The Nominating and Governance Committee shall determine, subject to review by the Board, whether a director candidate satisfies the applicable qualifications for election as a director, and the decision of that committee shall, subject to review, if any, by the Board, be final.

Section 3.2. Nomination of Representative Directors.

The Representative Director Nominating Body shall recommend a number of directors that equals 20% of the total number of directors serving on the Board (the "Representative Director(s)"), provided that if 20% of the directors then serving on the Board is not a whole number, such number of Representative Directors shall be rounded up to the next whole number. Directors not recommended by the Representative Director Nominating Body shall be nominated by the Nominating and Governance Committee. Any person nominated by the Representative Director Nominating Body and any petition candidate nominated pursuant to this Section 3.2 shall satisfy the compositional requirements determined by the Board from time to time pursuant to a resolution adopted by the Board in accordance with Section 3.1, designating the number of Representative Directors that are Non-Industry Directors and Industry Directors (if any).

The Representative Director Nominating Body shall provide a mechanism for holders of Trading Permits to provide input to the Representative Director Nominating Body with respect to nominees for the Representative Directors. The Representative Director Nominating Body shall issue a circular to the holders of Trading Permits identifying the Representative Director nominees selected by the Representative Director Nominating Body not earlier than December 1st and not later than January 15th, or the first business day thereafter if January 15th is not a business day.

Holders of Trading Permits may nominate alternative candidates for election to the Representative Director positions to be elected in a given year by submitting a petition signed by individuals representing not less than 10% of the total outstanding Trading Permits at that time. Petitions must be filed with the Secretary no later than 5:00 p.m. (Chicago time) on the 10th business day following the issuance of the circular to the holders of Trading Permits identifying the Representative Director nominees selected by the Representative Director Nominating Body (the "Petition Deadline"). The names of all Representative Director nominees recommended by the Representative Director Nominating Body and those selected pursuant to a valid and timely petition shall, immediately following their selection, be given to the Secretary who shall promptly issue a circular to all of the Trading Permit Holders identifying all such Representative Director candidates.

If one or more valid petitions are received, the Secretary shall issue a circular to all of the Trading Permit Holders identifying those individuals nominated for Representative Director by the Representative Director Nominating Body and those individuals nominated for Representative Director through the petition process as well as of the time and date of a run-off election to determine which individuals will be nominated as Representative Director(s) by the Nominating and Governance Committee (the "Run-off Election"). The Run-off Election will be held not more than 45 days after the Petition Deadline. In any Run-off Election, each holder of a Trading Permit shall have one vote with respect to each Trading Permit held by such Trading Permit Holder for each Representative Director position to be filled that year; provided,

however, that no holder of Trading Permits, either alone or together with its affiliates, may account for more than 20% of the votes cast for a candidate, and any votes cast by a holder of Trading Permits, either alone or together with its affiliates, in excess of this 20% limitation shall be disregarded. Votes may be cast in person or by proxy. Additionally, in any Run-off Election, Trading Permits representing one-third of the total outstanding Trading Permits entitled to vote, when present in person or represented by proxy, shall constitute a quorum for purposes of the Run-off Election. The Secretary shall issue a circular to all of the Trading Permit Holders setting forth the results of the Run-off Election. The number of individual Representative Director nominees equal to the number of Representative Director positions to be filled that year receiving the largest number of votes in the Run-off Election (after taking into account the voting limitation set forth herein) will be the persons approved by the Trading Permit Holders to be nominated as the Representative Director(s) by the Nominating and Governance Committee for that year.

Section 3.3. Powers of the Board.

The Board shall be the governing body of the Corporation and shall be vested with all powers necessary for the management of the business and affairs of the Corporation and for the promotion of its welfare, objects and purposes. The Board shall regulate the business conduct of Trading Permit Holders and may exercise all such powers of the Corporation and do all such lawful acts and things as are not by statute or the Certificate of Incorporation directed or required to be exercised or done by others. In the exercise of such powers, the Board may organize such subsidiary corporations, impose such fees and charges, adopt or amend such Rules, issue such orders and directions, and make such decisions as it deems necessary or appropriate. It may prescribe and impose penalties for violations of the Rules, for neglect or refusal to comply with orders, directions or decisions of the Board, or for any other offenses against the Corporation.

Section 3.4. Resignation, Disqualification and Removal of Directors.

(a) A director may resign at any time by giving written notice of his resignation to the Chairman of the Board or the Secretary, and such resignation, unless specifically contingent upon its acceptance, will be effective as of its date or of the date specified therein.

(b) In the event any Industry Director or Non-Industry Director fails to maintain the qualifications required for such category of director in Section 3.1 hereof, of which failure the Board shall be the sole judge, the term of office of such director shall terminate and such director shall thereupon cease to be a director, his office shall become vacant and, notwithstanding any provision to the contrary, the vacancy may be filled by the Board with a person who qualifies for the category in which the vacancy exists. Notwithstanding the foregoing, unless otherwise required by statute, the Certificate of Incorporation, regulations of the Securities and Exchange Commission ("SEC") or, if applicable, the regulations of any listing exchange on which the Corporation is listed, a director who fails to maintain the applicable qualifications may be allowed the later of (i) 45 days from the date when the Board determines the director is unqualified or (ii) until the next regular Board meeting following the date when the Board makes such determination, in which to requalify. Following the date when the Board determines the director is unqualified, the director shall be deemed not to hold office and the seat formerly held by the director shall be deemed to be vacant for all purposes. The Board shall be the sole judge of whether the director has requalified. If a director is determined to have requalified, the Board, in its sole discretion, may fill an existing vacancy in the Board or may increase the size of the

Board, as necessary, to appoint such director to the Board; provided, however, that the Board shall be under no obligation to return such director to the Board.

(c) No Representative Director may be removed from office by a vote of the stockholders at any time except for cause, which shall include, but not be limited to (i) a breach of a Representative Director's duty of loyalty to the Corporation or its stockholders, (ii) acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) transactions from which a Representative Director derived an improper personal benefit, or (iv) a failure of a Representative Director to be free from a statutory disqualification (as defined in Section 3(a)(39) of the Act). Any Representative Director may be removed for cause by the holders of a majority of the shares of stock then entitled to be voted at an election of directors.

Section 3.5. Filling of Vacancies.

(a) Notwithstanding any provision herein to the contrary, any vacancy in the Board, however occurring, including a vacancy resulting from an increase in the number of the directors, may be filled by vote of a majority of the directors then in office, although less than a quorum, or by a sole remaining director, provided such new director qualifies for the category in which the vacancy exists. A director elected to fill a vacancy shall hold office until the next annual meeting of stockholders, subject to the election and qualification of his or her successor and to his or her earlier death, resignation, disqualification or removal.

(b) If the Board fills a vacancy resulting from a Representative Director position becoming vacant prior to the expiration of such Representative Director's term, or resulting from the creation of an additional Representative Director position required by an increase in the size of the Board, then the Board shall follow the procedures set forth in this Section 3.5(b). In such an event, the Representative Director Nominating Body shall either (i) recommend an individual to the Board to be elected to fill such vacancy or (ii) provide a list of recommended individuals to the Board from which the Board shall elect the individual to fill such vacancy. The Board shall elect, pursuant to this Section 3.5(b), only individuals recommended by the Representative Director Nominating Body; provided, however, the Board shall not be required to take any action or elect any individual if the Board believes that taking such action or electing such individual would be contrary to the Board's fiduciary duties. The Representative Director Nominating Body shall only recommend individuals to fill a vacancy in a Representative Director position who satisfy the compositional requirements designated by the Board from time to time pursuant to resolution adopted by the Board in accordance with Section 3.1, designating the number of Representative Directors that are Non-Industry Directors and Industry Directors (if any).

Any vacancy filled pursuant to this Section 3.5(b), shall be filled by the vote of a majority of the directors then in office, although less than a quorum.

Section 3.6. Chairman of the Board of Directors.

The Board shall appoint one of the directors to serve as Chairman of the Board. Except as provided for in Section 3.7 hereof, the Chairman of the Board shall be the presiding officer at all meetings of the Board and stockholders and shall exercise such other powers and perform such other duties as are delegated to him or her by the Board.

Section 3.7. Lead Director.

The Board may appoint one of the Non-Industry Directors to serve as the Lead Director. The Lead Director shall perform such duties and possess such powers as the Board may from time to time prescribe. The Lead Director, if appointed, shall be authorized to preside at meetings of the directors that are not officers or employees of the Exchange.

Section 3.8. Acting Chairman and Vacancy in Chairman Position.

(a) In the absence or inability to act of the Chairman of the Board, the Board may designate an Acting Chairman of the Board. The Acting Chairman of the Board, in the absence or inability to act of the Chairman, shall be presiding officer at all meetings of the Board and shall exercise such other powers and perform such other duties as are delegated to the Acting Chairman by the Board.

(b) If a vacancy occurs in the office of Chairman, the Board may fill such vacancy by the affirmative vote of at least a majority of the directors then in office.

Section 3.9. Quorum.

At all meetings of the Board, two-thirds of the number of directors then in office shall constitute a quorum for the transaction of business, and the vote of a majority of the directors present at any meeting at which a quorum is present shall be the act of the Board, except as may be otherwise specifically provided by statute or the Certificate of Incorporation. If a quorum shall not be present at any meeting of the Board, a majority of the directors present thereat may adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum shall be present.

Section 3.10. Regular Meetings.

Regular meetings of the Board shall be held at such time and at such place as shall from time to time be determined by the Chairman of the Board with notice of such determination provided to the full Board.

Section 3.11. Special Meetings.

Special meetings of the Board may be called by the Chairman of the Board and shall be called by the Secretary upon the written request of any four directors. The Secretary shall give at least 24 hours notice of such meeting to each director, in a manner permitted by Section 7.1. Every such notice shall state the time and place of the meeting which shall be fixed by the person calling the meeting, but need not state the purpose thereof except as otherwise required by statute.

Section 3.12. Participation in Meeting.

Members of the Board or of any committee thereof may participate in a meeting of the Board or such committee by conference telephone or other communications equipment by means of which all persons participating in the meeting can hear each other, and such participation in a meeting shall constitute presence in person at such a meeting.

Section 3.13. Action by Written Consent.

Unless otherwise restricted by statute or the Certificate of Incorporation, any action required or permitted to be taken at any meeting of the Board or of any committee thereof may be taken without a meeting if all members of the Board or such committee, as the case may be, consent thereto in writing or by electronic transmission, and the writing or writings or electronic transmission or transmissions are filed with the minutes of proceedings of the Board or of such committee.

Section 3.14. Interested Directors.

No director shall be disqualified from participating in any meeting, action or proceeding of the Board by reason of being or having been a member of a committee which has made prior inquiry, examination or investigation of the subject under consideration. No director shall participate in the adjudication of any matter with respect to which the Board is acting as an adjudicative body under the Rules, and in which such director is personally interested, although interested directors may be counted in determining the presence of a quorum at the meeting of the Board or of a committee which authorizes actions with respect to such matter.

ARTICLE IV Committees

Section 4.1. Designation of Committees.

(a) Committees of the Board. The committees of the Board shall consist of an Executive Committee, a Regulatory Oversight and Compliance Committee, a Nominating and Governance Committee and such other standing and special committees as may be approved by the Board. Except as may be otherwise provided in these Bylaws or as may be otherwise provided for from time to time by resolution of the Board, the Board may, at any time, with or without cause, remove any member of any such committees of the Board.

(b) Committees of the Exchange. The Exchange also shall have such other committees as may be provided in these Bylaws or the Rules or as may be from time to time created by the Board. Except as may be otherwise provided in these Bylaws, the Rules or the resolution of the Board establishing any such other committee, the Chief Executive Officer or his or her designee, with the approval of the Board, shall appoint the members of such Exchange committees (other than the committees of the Board) and may designate, with the approval of the Board, a Chairman and a Vice-Chairman thereof. Except as may be otherwise provided in these Bylaws or the Rules, the Chief Executive Officer or his or her designee, with the approval of the Board, may, at any time, with or without cause, remove any member of any such Exchange committees.

Section 4.2. The Executive Committee.

The Executive Committee will include the Chairman of the Board, the Chief Executive Officer (if a director), the Lead Director, if any, at least one Representative Director and such other number of directors that the Board deems appropriate, provided that in no event shall the number of Non-Industry Directors constitute less than the number of Industry Directors serving on the Executive Committee (excluding the Chief Executive Officer from the calculation of Industry Directors for such purpose). Members of the Executive Committee (other than those specified in the immediately preceding sentence) shall be recommended by the Nominating and Governance Committee for approval by the Board. Members of the Executive Committee shall

not be subject to removal except by the Board. The Chairman of the Board shall be the Chairman of the Executive Committee. Each member of this Committee shall be a voting member. The members of the Executive Committee shall serve for a term of one year expiring at the first regular meeting of directors following the annual meeting of stockholders each year or until their successors are appointed. The Executive Committee shall have and may exercise all the powers and authority of the Board in the management of the business and affairs of the Corporation, except it shall not have the power and authority of the Board to (i) approve or adopt or recommend to the stockholders any action or matter (other than the election or removal of directors) expressly required by Delaware law to be submitted to stockholders for approval, including without limitation, amending the Certificate of Incorporation, adopting an agreement of merger or consolidation, approving a sale, lease or exchange of all or substantially all of the Corporation's property and assets, or approval of a dissolution of the Corporation or revocation of a dissolution, or (ii) adopt, alter, amend or repeal any bylaw of the Corporation.

Section 4.3. The Nominating and Governance Committee.

The Nominating and Governance Committee shall consist of at least five directors and shall at all times have a majority of directors that are Non-Industry Directors. All members of the committee shall be recommended by the Nominating and Governance Committee for approval by the Board. The exact number of Nominating and Governance Committee members shall be determined from time to time by the Board. Members of the Nominating and Governance Committee shall not be subject to removal except by the Board. The Chairman of the Nominating and Governance Committee shall be recommended by the Nominating and Governance Committee for approval by the Board. Subject to Section 3.2 and Section 3.5 of these Bylaws, the Nominating and Governance Committee shall have the authority to nominate individuals for election as directors of the Corporation. The Nominating and Governance Committee shall have such other duties and may exercise such other authority as may be prescribed by resolution of the Board and the Nominating and Governance Committee Charter as adopted by resolution of the Board. If the Nominating and Governance Committee has two or more Industry Directors, there shall be an Industry-Director Subcommittee consisting of all of the Industry Directors then serving on the Nominating and Governance Committee, which shall act as the Representative Director Nominating Body if and to the extent required by these Bylaws.

Section 4.4. The Regulatory Oversight and Compliance Committee.

The Regulatory Oversight and Compliance Committee shall consist of at least three directors, all of whom shall be Non-Industry Directors and all of whom shall be recommended by the Non-Industry Directors on the Nominating and Governance Committee for approval by the Board. The exact number of Regulatory Oversight and Compliance Committee members shall be determined from time to time by the Board. Members of the Regulatory Oversight and Compliance Committee shall not be subject to removal except by the Board. The Chairman of the Regulatory Oversight and Compliance Committee shall be recommended by the Non-Industry Directors of the Nominating and Governance Committee for approval by the Board. The Regulatory Oversight and Compliance Committee shall have such duties and may exercise such authority as may be prescribed by resolution of the Board, these Bylaws or the Rules of the Exchange.

Section 4.5. Other.

All other committees shall have such duties and may exercise such authority as may be prescribed for them by the Certificate of Incorporation, these Bylaws or the Rules or by resolution of the Board.

Section 4.6. Conduct of Proceedings.

Unless otherwise provided in the Certificate of Incorporation, these Bylaws, the Rules, the charter of the committee or by the Board of Directors by resolution, each committee may determine the manner in which committee proceedings shall be conducted. In the absence of any such established procedures, each committee shall conduct its business in the same manner as the Board of Directors conducts its business pursuant to Article 3 of these Bylaws. Committees shall keep minutes of their meetings and periodically report their proceedings to the Board and appropriate committees of the Board to the extent requested by the Board or Board committee.

ARTICLE V Officers

Section 5.1. Designation; Number; Election.

(a) The officers of the Corporation shall be a Chief Executive Officer, a President, a Chief Financial Officer, one or more Vice-Presidents (the number thereof to be determined by the Board), a Secretary, a Treasurer, and such other officers as the Board may determine, including an Assistant Secretary and Assistant Treasurer. The Chief Executive Officer shall be appointed by an affirmative vote of the majority of the Board, and may, but need not be the Chairman of the Board. Such affirmative vote may also prescribe his duties not inconsistent with these Bylaws and may prescribe a tenure of office. The remaining officers of the Corporation shall be appointed by the Board, each to serve until a successor has been duly chosen and qualified or until the officer's earlier death, resignation or removal.

(b) Two or more offices may be held by the same person, except the offices of Chief Executive Officer and President. In addition, the Chief Executive Officer and the President may not also be either the Secretary or Assistant Secretary.

Section 5.2. Chief Executive Officer.

The Chief Executive Officer shall, subject to the direction of the Board, have general charge and supervision of the business of the Corporation. The Chief Executive Officer shall be the official representative of the Corporation in all public matters. The Chief Executive Officer shall perform such other duties and possess such other powers as the Board may from time to time prescribe and that are incident to such office. The Chief Executive Officer shall not engage in any other business during his incumbency except with approval of the Board, and by his acceptance of the office of Chief Executive Officer he shall be deemed to have agreed to uphold these Bylaws.

Section 5.3. President.

The President shall be the chief operating officer of the Corporation and shall perform such duties and possess such powers as the Board or the Chief Executive Officer may from time to time prescribe. In the event of the absence, inability or refusal to act of the Chief Executive Officer, the President shall perform the officer duties of the Chief Executive Officer and, when

so performing, shall have all the powers of and be subject to all the restrictions upon the office of Chief Executive Officer.

Section 5.4. Chief Financial Officer.

The Chief Financial Officer shall perform such duties and possess such powers as the Board or the Chief Executive Officer may from time to time prescribe. The Chief Financial Officer shall have the custody of the Corporation's funds and securities; shall keep full and accurate all books and accounts of the Corporation as shall be necessary or desirable in accordance with applicable law or generally accepted accounting principles; shall deposit all monies and other valuable effects in the name and to the credit of the Corporation as may be ordered by the Chief Executive Officer or the Board; shall cause the funds of the Corporation to be disbursed when such disbursements have been duly authorized, taking proper vouchers for such disbursements; and shall render to the Board, at its regular meeting or when the Board so requires, an account of the Corporation.

Section 5.5. Vice Presidents.

Vice Presidents shall perform the duties prescribed by the Board, Chief Executive Officer or President.

Section 5.6. Secretary.

The Secretary shall keep official records of meetings of stockholders and of Trading Permit Holders at which action is taken and of all meetings of the Board; the Secretary shall, in person or by representative, perform like services for the standing and special committees when required; the Secretary shall give notice of meetings of stockholders and of Trading Permit Holders and of special meetings of the Board in accordance with the provisions of the Rules or these Bylaws or as required by statute; the Secretary shall post all notices which may be required to be posted upon the Corporation website; the Secretary shall be custodian of the books, records, and corporate seal of the Corporation and attest, upon behalf of the Corporation, all contracts and other documents requiring authentication; the Secretary shall perform such other duties as may be prescribed by the Board, Chairman of the Board, Chief Executive Officer or President.

Section 5.7. Treasurer.

The Treasurer shall perform such duties and possess such powers as the Board, the Chief Executive Officer or the Chief Financial Officer may from time to time prescribe.

Section 5.8. Removals.

Any officer appointed by the Board may be removed at any time by the Board, the Chief Executive Officer or the President; provided that the Chief Executive Officer can only be removed by the Board. Any such removal shall be without prejudice to the contract rights, if any, of the person so removed. Any vacancies occurring in any office of the Corporation at any time may be filled by the Board or an officer authorized by the Board to appoint a person to hold such office.

Section 5.9. Resignations.

Any officer may resign by delivering such officer's written resignation to the Corporation at its principal office or to the Chief Executive Officer or Secretary. Such resignation shall be effective upon receipt unless it is specified to be effective at some other time or upon the happening of some other event.

Section 5.10. Vacancies.

The Board may fill any vacancy occurring in any office for any reason and may, in its discretion, leave unfilled for such period as it may determine any offices other than those of Chief Executive Officer, President, Secretary and Treasurer. Any vacancies occurring in any office of the Corporation at any time also may be filled by an officer authorized by the Board to appoint a person to hold such office. Each such successor shall hold office until such officer's successor is elected and qualified, or until such officer's earlier death, resignation or removal.

Section 5.11. Salaries.

Officers of the Corporation shall be entitled to such salaries, compensation or reimbursement as shall be fixed or allowed from time to time by the Board unless otherwise delegated to a Committee of the Board or to members of senior management. No officer shall be prevented from receiving such salary by reason of the fact that the officer is also a director of the Corporation.

ARTICLE VI Advisory Board

Section 6.1. Advisory Board.

The Board will establish an Advisory Board which shall advise the Board and management regarding matters of interest to Trading Permit Holders. It shall consist of such number of members as set by the Board from time to time, including at least two members who are Trading Permit Holders or persons associated with Trading Permit Holders. The Chief Executive Officer, or his or her designee, shall be the Chairman of the Advisory Board. The members of the Advisory Board shall be recommended by the Nominating and Governance Committee for approval by the Board. There shall be a Trading Permit Holders Subcommittee of the Advisory Board consisting of all members of the Advisory Board who are Trading Permit Holders or persons associated with Trading Permit Holders, which shall act as the Representative Director Nominating Body if and to the extent required by these Bylaws.

ARTICLE VII Notices

Section 7.1. Notices.

Except as provided in Section 7.2 and to the extent permitted by law, any notice required to be given by the Bylaws or the Rules or otherwise shall be deemed to have been given:

- (a) in person upon delivery of the notice in person to the Person to whom such notice is addressed;

(b) by mail upon deposit of the notice in the United States mail, enclosed in a postage prepaid envelope;

(c) by messenger or overnight courier service upon provision of the notice to the messenger or courier service, provided that the delivery method does not require payment of the messenger or courier service fee to deliver the notice by the Person to whom the notice is addressed;

(d) by facsimile machine upon acknowledgment by the facsimile machine used to transmit the notice of the successful transmission of the notice;

(e) by electronic mail upon electronic transmission of the notice; and

(f) by telephone when received.

Any such notice must be addressed to its intended recipient at the intended recipient's address (including the intended recipient's business or residence address, facsimile number, electronic address, or telephone number, as applicable) as it appears on the books and records of the Corporation, or if no address appears on such books and records, then at such address as shall be otherwise known to the Secretary, or if no such address appears on such books and records, then in care of the registered agent of the Corporation in the State of Delaware. In the event that a notice is not provided in conformity with the provisions of this Section 7.1, the notice will be deemed to have been given to its intended recipient upon any receipt of the notice by its intended recipient.

Section 7.2. Electronic Notice to Stockholders.

Whenever any notice whatsoever is required to be given in writing to any stockholder by law, by the Certificate of Incorporation or by these Bylaws, such notice may be given by a form of electronic transmission if the stockholder to whom such notice is given has previously consented to the receipt of notice by electronic transmission.

Section 7.3. Waiver of Notice.

Whenever notice is required to be given under the provisions of any statute, the Certificate of Incorporation, these Bylaws, the Rules or otherwise, a written waiver thereof, signed by the Person entitled to notice, or his proxy, whether before or after the time stated therein shall be deemed equivalent to notice. Except as may be otherwise specifically provided by statute, any waiver by mail, messenger, overnight courier, facsimile machine, or electronic mail, bearing the name of the Person entitled to notice shall be deemed a written waiver duly signed. Attendance of a Person at a meeting, including attendance by proxy, shall constitute a waiver of notice of such meeting except when the Person attends a meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business the meeting is not lawfully called or convened. Except as required by statute or the Certificate of Incorporation, neither the business to be transacted at, nor the purpose of, any regular or special meeting of the stockholders, directors or any committee need be specified in any written waiver of notice.

ARTICLE VIII General Provisions

Section 8.1. Fiscal Year.

Except as otherwise determined from time to time by the Board, the fiscal year of the Corporation ends on the close of business on December 31 of each year.

Section 8.2. Checks, Drafts and Other Instruments.

All checks, drafts or other orders for the payment of money, notes or other evidences of indebtedness issued in the name of the Corporation shall be signed by such officer or officers, or by such agent or agents of the Corporation and in such manner as the Board may from time to time determine.

Section 8.3. Corporate Seal.

The corporate seal, if any, shall be in such form as shall be approved by the Board or an officer of the Corporation.

Section 8.4. Voting Securities.

Except as the Board may otherwise designate, the Chairman of the Board, Chief Executive Officer, Chief Financial Officer or Treasurer may waive notice of, and act as, or appoint any person or persons to act as, proxy or attorney-in-fact for the Corporation (with or without power of substitution) at, any meeting of stockholders or shareholders of any other corporation or organization, the securities of which may be held by this Corporation.

Section 8.5. Evidence of Authority.

A certificate by the Secretary, or Assistant Secretary, if any, as to any action taken by the stockholders, directors, a committee or any officer or representative of the Corporation shall, as to all Persons who rely on the certificate in good faith, be conclusive evidence of such action.

Section 8.6. Certificate of Incorporation.

All references in these Bylaws to the Certificate of Incorporation shall be deemed to refer to the Certificate of Incorporation of the Corporation, as amended, altered or restated and in effect from time to time.

Section 8.7. Transactions with Interested Parties.

No contract or transaction between the Corporation and one or more of the directors or officers, or between the Corporation and any other corporation, limited liability company, partnership, association or other organization in which one or more of the directors or officers are directors, managers or officers, or have a financial interest, shall be void or voidable solely for this reason, or solely because the director or officer is present at or participates in the meeting of the Board or a committee of the Board which authorizes the contract or transaction or solely because his, her or their votes are counted for such purpose, if:

(a) The material facts as to his, her or their relationship or interest and as to the contract or transaction are disclosed or are known to the Board or the committee, and the Board or committee in good faith authorizes the contract or transaction by the affirmative votes of a majority of the disinterested directors, even though the disinterested directors be less than a quorum;

(b) The material facts as to his, her or their relationship or interest and as to the contract or transaction are disclosed or are known to the stockholders entitled to vote thereon, and the contract or transaction is specifically approved in good faith by vote of the stockholders; or

(c) The contract or transaction is fair as to the Corporation as of the time it is authorized, approved or ratified by the Board, a committee of the Board or the stockholders.

Both (i) directors who are directors of both the Corporation and a party with whom the Corporation may be engaged in a transaction and (ii) interested directors may be counted in determining the presence of a quorum at a meeting of the Board or of a committee at which the contract or transaction is authorized.

Section 8.8. Severability.

Any determination that any provision of these Bylaws is for any reason inapplicable, illegal or ineffective shall not affect or invalidate any other provision of these Bylaws.

Section 8.9. Pronouns.

All pronouns used in these Bylaws shall be deemed to refer to the masculine, feminine or neuter, singular or plural, as the identity of the person or persons may require.

Section 8.10. Contracts.

In addition to the powers otherwise granted to officers pursuant to Article V hereof, the Board may authorize any officer or officers, or any agent or agents, of the Corporation to enter into any contract or to execute and deliver any instrument in the name of and on behalf of the Corporation, and such authority may be general or confined to specific instances.

Section 8.11. Loans.

The Corporation may, to the extent permitted by applicable law, lend money to, or guarantee any obligation of, or otherwise assist any officer or other employee of the Corporation or of its subsidiaries, including any officer or employee who is a director of the Corporation or its subsidiaries, whenever, in the judgment of the directors, such loan, guaranty or assistance may reasonably be expected to benefit the Corporation. The loan, guaranty or other assistance may include, without limitation, a pledge of shares of stock of the Corporation. Nothing in this Section 8.11 shall be deemed to deny, limit or restrict the powers of guaranty or warranty of the Corporation at common law or under any statute.

Section 8.12. Books and Records.

Subject to applicable law, the Board shall have power from time to time to determine to what extent and at what times and places and under what conditions and regulations the accounts and books of the Corporation, or any of them, shall be open to the inspection of the stockholders; and no stockholder shall have any right to inspect any account or book or document of the Corporation, except as conferred by the laws of the State of Delaware. The Corporation shall keep its books and records within the United States. Any books or records of the Corporation may be kept on, or be in the form of, magnetic tape, computer disk, or any other information storage device, provided that the records so kept can be converted into clearly legible form within a reasonable time.

Section 8.13. Section Headings.

Section headings in these Bylaws are for convenience of reference only and shall not be given any substantive effect in limiting or otherwise construing any provision herein.

Section 8.14. Inconsistent Provisions.

In the event that any provision of these Bylaws is or becomes inconsistent with any provision of the Certificate of Incorporation, the General Corporation Law of the State of Delaware (“DGCL”) or any other applicable law, the provision of these Bylaws shall not be given any effect to the extent of such inconsistency but shall otherwise be given full force and effect.

ARTICLE IX Amendments

Section 9.1. By the Board.

These Bylaws may be altered, amended or repealed, or new Bylaws may be adopted, by the Board.

Section 9.2. By the Stockholders.

These Bylaws may be altered, amended or repealed or new Bylaws may be adopted by the affirmative vote of the majority of the stockholders present at any annual meeting of the stockholders at which a quorum is present.

Section 9.3. SEC Approval.

Before any amendment to, alteration or repeal of any provision of the Bylaws of the Corporation under this Article IX shall be effective, those changes shall be submitted to the Board and if the same must be filed with or filed with and approved by the SEC, then the proposed changes to the Bylaws of the Corporation shall not become effective until filed with or filed with and approved by the SEC, as the case may be.

ARTICLE X Rulemaking

Section 10.1. Rulemaking.

The Board may, by the affirmative vote of a majority of a quorum of the Board, alter, adopt, amend or repeal as it may deem necessary or proper any of the Corporation’s Rules, which shall not become effective until filed with or filed with and approved by the SEC, as the case may be.

W CBOE Futures Exchange, LLC

X CBOE Stock Exchange, LLC

Y Cboe Exchange, Inc.

Delaware

The First State

Page 1

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE RESTATED CERTIFICATE OF "CHICAGO BOARD OPTIONS EXCHANGE, INCORPORATED", CHANGING ITS NAME FROM "CHICAGO BOARD OPTIONS EXCHANGE, INCORPORATED" TO "CBOE EXCHANGE, INC.", FILED IN THIS OFFICE ON THE SIXTEENTH DAY OF OCTOBER, A.D. 2017, AT 9:54 O`CLOCK P.M.

A FILED COPY OF THIS CERTIFICATE HAS BEEN FORWARDED TO THE NEW CASTLE COUNTY RECORDER OF DEEDS.



778792 8100
SR# 20176643026

You may verify this certificate online at corp.delaware.gov/authver.shtml

A handwritten signature in black ink, appearing to read "JB", is written over a horizontal line. Below the line, the text "Jeffrey W. Bullock, Secretary of State" is printed.

Jeffrey W. Bullock, Secretary of State

Authentication: 203409578
Date: 10-17-17

FOURTH AMENDED AND RESTATED

CERTIFICATE OF INCORPORATION

of

CHICAGO BOARD OPTIONS EXCHANGE, INCORPORATED

The corporation filed its original Certificate of Incorporation with the Secretary of State of the State of Delaware on February 8, 1972. This Fourth Amended and Restated Certificate of Incorporation of the corporation, which restates and integrates and also further amends the provisions of the corporation's Third Amended and Restated Certificate of Incorporation, was duly adopted in accordance with the provisions of Sections 242 and 245 of the General Corporation Law of the State of Delaware and by the written consent of its sole stockholder in accordance with Section 228 of the General Corporation Law of the State of Delaware. The Third Amended and Restated Certificate of Incorporation of the corporation is hereby amended, integrated and restated to read in its entirety as follows:

FIRST: The name of the corporation (the "Corporation") is Cboe Exchange, Inc.

SECOND: The address of the registered office of the Corporation in the State of Delaware is Corporation Trust Center, 1209 Orange Street, in the City of Wilmington, County of New Castle, Delaware 19801-1297. The name of the Corporation's registered agent at such address shall be The Corporation Trust Company.

THIRD: The nature of the business or purposes to be conducted or promoted by the Corporation is:

(a) To conduct and carry on the function of an "exchange" within the meaning of that term in the Securities Exchange Act of 1934, as amended (the "Act");

(b) To provide a securities market place with high standards of honor and integrity among its Trading Permit Holders and other persons holding rights to access the Corporation's facilities and to promote and maintain just and equitable principles of trade and business. The term "Trading Permit Holders" shall have the meaning given to that term in Section 1.1 of the Corporation's Bylaws, as the same may be amended from time to time (the "Corporation's Bylaws"); and

(c) To engage in any other lawful act or activity for which corporations may be organized under the General Corporation Law of the State of Delaware ("GCL").

FOURTH: The total number of shares of stock which the Corporation shall have authority to issue is one thousand (1,000) shares of common stock having a par value of \$0.01 per share (the "Common Stock"). Cboe Global Markets, Inc. will be the sole owner of the Common Stock. Any sale, transfer or assignment by Cboe Global Markets, Inc. of any shares of Common Stock will be subject to prior approval by the Securities and Exchange Commission (the "Commission") pursuant to the rule filing procedure under Section 19 of the Act.

FIFTH: (a) The governing body of the Corporation shall be its Board of Directors. The business and affairs of the Corporation shall be managed by or under the direction of the Board of Directors.

(b) The Board of Directors of the Corporation shall consist of not less than 5 directors, the exact number to be fixed in accordance with the Corporation's Bylaws.

(c) Only persons who are nominated by the Nominating and Governance Committee shall be eligible for election as directors. The Nominating and Governance Committee shall be bound to accept and nominate (a) the individual(s) recommended by the Representative Director Nominating Body (as defined in the Corporation's Bylaws) for nomination as Representative Director (as defined in the Corporation's Bylaws), provided that the individuals so nominated by the Representative Director Nominating Body are not opposed by a petition candidate or (b) the individual(s) who receive the most votes pursuant to a petition election as set forth in Section 3.2 of the Corporation's Bylaws; provided, however, that any individual(s) recommended by the Representative Director Nominating Body and any individual(s) who are petition candidates pursuant to clause (b) of the preceding sentence shall satisfy the compositional requirements determined by the Board of Directors from time to time pursuant to a resolution adopted by the Board in accordance with Section 3.1 of the Corporation's Bylaws, designating the number of Representative Directors that are Non-Industry Directors and Industry Directors (if any), as such terms are defined in the Corporation's Bylaws; and provided further, that the Board of Directors and/or Nominating and Governance Committee, as applicable, shall make such determinations as to whether a director candidate satisfies applicable qualifications for election as a director pursuant to and in accordance with Section 3.1 of the Corporation's Bylaws.

(d) In discharging his or her responsibilities as a member of the Board of Directors, and to the fullest extent permitted by law, each director shall take into consideration the effect that his or her actions would have on the ability of the Corporation to carry out the Corporation's responsibilities under the Act and on the ability of the Corporation: to engage in conduct that fosters and does not interfere with the Corporation's ability to prevent fraudulent and manipulative acts and practices; to promote just and equitable principles of trade; to foster cooperation and coordination with persons engaged in regulating, clearing, settling, processing information with respect to, and facilitating transactions in securities; to remove impediments to and perfect the mechanisms of a free and open market and a national market system; and, in general, to protect investors and the public interest. In discharging his or her responsibilities as a member of the Board of Directors or as an officer or employee of the Corporation, each such director, officer or employee shall comply with the federal securities laws and the rules and regulations thereunder and shall cooperate with the Commission, and the Corporation pursuant to its regulatory authority.

SIXTH: (a) The Corporation shall, to the fullest extent permitted by applicable law as it presently exists or may hereafter be amended, indemnify and hold harmless any person (a "Covered Person") who was or is made or is threatened to be made a party or is otherwise involved in any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (a "proceeding"), by reason of the fact that he or she is or was a director, officer or member of a committee of the Corporation, or, while a director or officer of the Corporation, is or was serving at the request of the Corporation as a director or

officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise or non-profit entity, including service with respect to employee benefit plans, against all liability and loss suffered and expenses (including attorneys' fees), judgment, fines and amounts paid in settlement actually and reasonably incurred by such Covered Person in connection with a proceeding. Notwithstanding the preceding sentence, except as otherwise provided in Section (c) of this Article Sixth, the Corporation shall be required to indemnify a Covered Person in connection with a proceeding (or part thereof) commenced by such Covered Person only if the commencement of such proceeding (or part thereof) by the Covered Person was authorized in the specific case by the Board of Directors of the Corporation.

(b) Expenses (including attorneys' fees) incurred by a Covered Person in defending a proceeding, including appeals, shall, to the extent not prohibited by law, be paid by the Corporation in advance of the final disposition of such proceeding; provided, however, that the Corporation shall not be required to advance any expenses to a person against whom the Corporation directly brings an action, suit or proceeding alleging that such person (1) committed an act or omission not in good faith or (2) committed an act of intentional misconduct or a knowing violation of law. Additionally, an advancement of expenses incurred by a Covered Person shall be made only upon delivery to the Corporation of an undertaking, by or on behalf of such Covered Person, to repay all amounts so advanced if it shall ultimately be determined by final judicial decision from which there is no further right to appeal or otherwise in accordance with Delaware law that such Covered Person is not entitled to be indemnified for such expenses under this Article Sixth.

(c) If a claim for indemnification (following the final disposition of such action, suit or proceeding) or advancement of expenses under this Article Sixth is not paid in full within thirty days after a written claim therefor by the Covered Person has been received by the Corporation, the Covered Person may file suit to recover the unpaid amount of such claim and, if successful in whole or in part, shall be entitled to be paid the expense of prosecuting such claim to the fullest extent permitted by law. In any action the Corporation shall have the burden of proving that the Covered Person is not entitled to the requested indemnification or advancement of expenses under applicable law.

(d) The provisions of this Article Sixth shall be deemed to be a contract between the Corporation and each Covered Person who serves in any such capacity at any time while this Article Sixth is in effect, and any repeal or modification of any applicable law or of this Article Sixth shall not affect any rights or obligations then existing with respect to any state of facts then or theretofore existing or any action, suit or proceeding theretofore or thereafter brought or threatened based in whole or in part upon any such state of facts.

(e) Persons not expressly covered by the foregoing provisions of this Article Sixth, such as those (x) who are or were employees or agents of the Corporation, or are or were serving at the request of the Corporation as employees or agents of another corporation, partnership, joint venture, trust or other enterprise, or (y) who are or were directors, officers, employees or agents of a constituent corporation absorbed in a consolidation or merger in which the Corporation was the resulting or surviving corporation, or who are or were serving at the request of such constituent corporation as directors, officers, employees or agents of another corporation,

partnership, joint venture, trust or other enterprise, may be indemnified or advanced expenses to the extent authorized at any time or from time to time by the Board of Directors.

(f) The rights conferred on any Covered Person by this Article Sixth shall not be deemed exclusive of any other rights to which such Covered Person may be entitled by law or otherwise, and shall continue as to a person who has ceased to be a director, officer, employee or agent and shall inure to the benefit of the heirs, executors and administrators of such person.

(g) The Corporation's obligation, if any, to indemnify or to advance expenses to any Covered Person who was or is serving at its request as a director, officer, employee or agent of another corporation, partnership, joint venture, trust, enterprise or nonprofit entity shall be reduced by any amount such Covered Person may collect as indemnification or advancement of expenses from such other corporation, partnership, joint venture, trust, enterprise or non-profit entity.

(h) Any repeal or modification of the foregoing provisions of this Article Sixth shall not adversely affect any right or protection hereunder of any Covered Person in respect of any act or omission occurring prior to the time of such repeal or modification.

(i) The Corporation may purchase and maintain insurance, at its expense, to protect itself and any director, manager, officer, trustee, employee or agent of the Corporation or another corporation, or of a partnership, limited liability company, joint venture, trust or other enterprise against any expense, liability or loss (as such terms are used in this Article Sixth), whether or not the Corporation would have the power to indemnify such person against such expense, liability or loss under the GCL.

SEVENTH: The Corporation reserves the right to amend this Certificate of Incorporation, and to change or repeal any provision of this Certificate of Incorporation, in the manner prescribed at the time by statute, and all rights conferred upon stockholders by this Certificate of Incorporation are granted subject to this reservation. Before any amendment to, or repeal of, any provision of this Certificate of Incorporation shall be effective, those changes shall be submitted to the Board of Directors of the Corporation and if such amendment or repeal must be filed with or filed with and approved by the Commission, then the proposed changes to this Certificate of Incorporation shall not become effective until filed with or filed with and approved by the Commission, as the case may be.

EIGHTH: A director of the Corporation shall not be liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director, except to the extent such exemption from liability or limitation thereof is not permitted under the GCL as the same exists or may hereafter be amended. Any amendment, modification or repeal of the foregoing sentence shall not adversely affect any right or protection of a director of the Corporation hereunder in respect of any act or omission occurring prior to the time of such amendment, modification or repeal.

NINTH: Unless and except to the extent that the Corporation's Bylaws shall so require, the election of directors of the Corporation need not be by written ballot.

TENTH: In furtherance and not in limitation of the powers conferred by the laws of the State of Delaware, the Board of Directors of the Corporation is expressly authorized to make, alter and repeal the Corporation's Bylaws.

ELEVENTH: To the fullest extent permitted by law, all confidential information pertaining to the self-regulatory function of the Corporation (including but not limited to disciplinary matters, trading data, trading practices and audit information) contained in the books and records of the Corporation shall: (i) not be made available to any persons other than to those officers, directors, employees and agents of the Corporation that have a reasonable need to know the contents thereof; (ii) be retained in confidence by the Corporation and the officers, directors, employees and agents of the Corporation; and (iii) not be used for any commercial purposes. Nothing in this Article Eleventh shall be interpreted as to limit or impede the rights of the Commission to access and examine such confidential information pursuant to the federal securities laws and the rules and regulations thereunder, or to limit or impede the ability of any officers, directors, employees or agents of the Corporation to disclose such confidential information to the Commission.

IN WITNESS WHEREOF, Chicago Board Options Exchange, Incorporated has caused this certificate to be signed as of this 16th day of October, 2017.

CHICAGO BOARD OPTIONS EXCHANGE,
INCORPORATED.

By: 

Name: Edward T. Tilly

Its: Chief Executive Officer

NINTH AMENDED AND RESTATED

BYLAWS OF

CBOE EXCHANGE, INC.

ARTICLE I Definitions

Section 1.1. Definitions.

When used in these Bylaws, except as expressly otherwise provided or unless the context otherwise requires:

- (a) The term “Act” means the Securities Exchange Act of 1934, as amended.
- (b) The term “affiliate” of a Person or “affiliated with” another Person shall have the meaning given to such term in the Rules of the Exchange.
- (c) The term “Board” means the Board of Directors of the Corporation.
- (d) The term “Corporation” means the Cboe Exchange, Inc.
- (e) The term “Exchange” means the Corporation, its exchange market and any facilities thereof.
- (f) The term “Trading Permit Holder” means any individual, corporation, partnership, limited liability company or other entity authorized by the Rules that holds a Trading Permit. If a Trading Permit Holder is an individual, the Trading Permit Holder may also be referred to as an “individual Trading Permit Holder.” If a Trading Permit Holder is not an individual, the Trading Permit Holder may also be referred to as a “TPH organization.” A Trading Permit Holder is a “member” solely for purposes of the Act; however, one’s status as a Trading Permit Holder does not confer on that Person any ownership interest in the Exchange.
- (g) The term “Person” shall mean an individual, partnership (general or limited), joint stock company, corporation, limited liability company, trust or unincorporated organization, or any governmental entity or agency or political subdivision thereof.
- (h) The term “Rules” means the rules of the Exchange as adopted or amended from time to time.
- (i) The term “Trading Permit” shall have the meaning given to such term in the Rules of the Exchange.
- (j) The term “associated with an entity” means any partner, officer or director of such entity (or any person occupying a similar status or performing similar functions), any person directly or indirectly controlling, controlled by, or under common control with such entity, or any employee of such entity.
- (k) The term “Representative Director Nominating Body” shall mean the Industry-Director Subcommittee of the Nominating and Governance Committee if there are at least two Industry Directors on the Nominating and Governance Committee. If the Nominating and Governance Committee has less than two Industry Directors, then the “Representative

Director Nominating Body” shall mean the Trading Permit Holders Subcommittee of the Advisory Board.

ARTICLE II Stockholders

Section 2.1. Place of Meetings.

All meetings of stockholders shall be held at such place within or without the State of Delaware as may be designated from time to time by the Board or the Chairman of the Board (or, if there is no Chairman of the Board, the Chief Executive Officer) or, if not so designated, at the principal place of business of the Corporation in Chicago, Illinois.

Section 2.2. Annual Meetings.

If required by applicable law, an annual meeting of stockholders shall be held, beginning with the year immediately following the year in which the restructuring of the Corporation from a non-stock corporation to a stock corporation and wholly-owned subsidiary of Cboe Global Markets, Inc. is consummated, on the third Tuesday in May of each year or such other date as may be fixed by the Board, at such time as may be designated by the Secretary prior to the giving of notice of the meeting, for the purpose of electing directors to fill expiring terms and any vacancies in unexpired terms and for the transaction of business as may properly come before the meeting. In no event shall the annual meeting date each year be prior to the completion of the process for the nomination of the Representative Directors for that annual meeting as set forth in Sections 3.1 and 3.2.

Section 2.3. Special Meetings.

Special meetings of stockholders, for any purpose or purposes, unless otherwise prescribed by statute or by the Certificate of Incorporation of the Corporation, may be called by the Chairman of the Board or by a majority of the Board.

Section 2.4. Notice of Stockholders' Meetings.

Unless otherwise prescribed by statute or the Certificate of Incorporation, notice of each meeting of stockholders, stating the date, time and place thereof, and, in the case of special meetings, the purpose or purposes for which such meeting is called, shall be given to each stockholder of record entitled to vote thereat not more than 60 days and at least 10 days before the date of the meeting.

Section 2.5 Quorum and Adjournments.

Except as otherwise provided by statute or the Certificate of Incorporation, a majority of the outstanding stock of the Corporation entitled to vote at the meeting, when present in person or represented by proxy, shall constitute a quorum at all meetings of stockholders for the transaction of business. If such quorum shall not be present or represented by proxy at any meeting of stockholders, holders of a majority of the stock present in person or represented by proxy at the meeting shall have power to adjourn the meeting from time to time, without notice other than announcement at the meeting unless otherwise required by statute, until a quorum shall be present or represented. At any such adjourned meeting at which a quorum is present, any business may be transacted which might have been transacted at the meeting as originally

notified. Nothing in these Bylaws shall affect the right to adjourn a meeting from time to time where a quorum is present.

Section 2.6. Voting by Stockholders.

With respect to any question brought before a meeting, when a quorum is present, a majority of the votes properly cast on any question shall decide the question, unless the question is one upon which by express provision of statute or the Certificate of Incorporation, a different vote is required, in which case such express provision shall govern and control. Notwithstanding the preceding sentence, a plurality of votes properly cast shall elect the directors.

Section 2.7. Determination of Stockholders of Record.

(a) The Board may fix a record date to determine the stockholders entitled to notice of and to vote at a meeting of stockholders or any adjournment thereof ("Record Date"). The Record Date shall not be more than 60 days nor less than 10 days before the date of the meeting.

(b) If no Record Date is fixed by the Board for a meeting of stockholders, the Record Date for the meeting shall be at the close of business on the day preceding the date on which notice of the meeting is given by the Corporation.

(c) A Record Date shall apply to any adjournment of a meeting of stockholders; provided, however, that the Board may fix a new Record Date for the adjourned meeting.

Section 2.8. Action by Written Consent of Stockholders.

Unless otherwise restricted by the Certificate of Incorporation, any corporate action upon which a vote of stockholders is required or permitted may be taken without a meeting, without prior notice and without a vote, if a consent in writing, setting forth the action so taken, shall be signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote on that matter were present and voted and shall be delivered to the Corporation in the manner required by law at its registered office within the State of Delaware or at its principal place of business or to an officer or agent of the Corporation having custody of the book in which proceedings of meetings of stockholders of the Corporation are recorded. Every written consent shall bear the date of signature of each stockholder who signs the consent and no written consent shall be effective to take the corporate action referred to in the consent unless, within 60 days of the earliest dated consent delivered to the Corporation, written consents signed by a sufficient number of holders to take action are delivered to the Corporation as required by these Bylaws or by applicable law. Prompt notice of the taking of the corporate action without a meeting by less than unanimous written consent shall be given to those stockholders who have not so consented in writing.

ARTICLE III Board of Directors

Section 3.1. Number, Election and Term of Office of Directors.

The Board shall consist of not less than 5 directors. The Board shall determine from time to time pursuant to resolution adopted by the Board the total number of directors, the number of Non-Industry Directors and Industry Directors (if any), and the number of Representative Directors that are Non-Industry Directors and Industry Directors (if any). In no event shall the

number of Non-Industry Directors constitute less than the number of Industry Directors (excluding the Chief Executive Officer from the calculation of Industry Directors for such purpose). In addition, at all times at least 20% of directors serving on the Board shall be Representative Directors nominated (or otherwise selected through the petition process) as provided for in Section 3.2 by the Representative Director Nominating Body.

A “Non-Industry Director” is a person who is not an Industry Director.

An “Industry Director” is any director who (i) is a holder of a Trading Permit or otherwise subject to regulation by the Exchange; (ii) is a broker-dealer or an officer, director or employee of a broker-dealer or has been in any such capacity within the prior three years; (iii) is, or was within the prior three years, associated with an entity that is affiliated with a broker-dealer whose revenues account for a material portion of the consolidated revenues of the entities with which the broker-dealer is affiliated; (iv) has a material ownership interest in a broker-dealer and has investments in broker-dealers that account for a material portion of the director's net worth; (v) has a consulting or employment relationship with or has provided professional services to the Exchange or any of its affiliates or has had such a relationship or has provided such services within the prior three years; or (vi) provides, or has provided within the prior three years, professional or consulting services to a broker-dealer, or to an entity with a 50% or greater ownership interest in a broker-dealer whose revenues account for a material portion of the consolidated revenues of the entities with which the broker-dealer is affiliated, and the revenue from all such professional or consulting services accounts for a material portion of either the revenues received by the director or the revenues received by the director's firm or partnership.

Notwithstanding the foregoing, a director shall not be deemed to be an “Industry Director” solely because either (A) the person is or was within the prior three years an outside director of a broker-dealer or an outside director of an entity that is affiliated with a broker-dealer, provided that the broker-dealer is not a holder of a Trading Permit or otherwise subject to regulation by the Exchange, or (B) the person is or was within the prior three years associated with an entity that is affiliated with a broker-dealer whose revenues do not account for a material portion of the consolidated revenues of the entities with which the broker-dealer is affiliated, provided that the broker-dealer is not a holder of a Trading Permit or otherwise subject to regulation by the Exchange. At all times, at least one Non-Industry Director shall be a Non-Industry Director exclusive of the exceptions provided for in the immediately preceding sentence and shall have no material business relationship with a broker or dealer or the Exchange or any of its affiliates. For purposes of this Section 3.1, the term “outside director” shall mean a director of an entity who is not an employee or officer (or any person occupying a similar status or performing similar functions) of such entity.

The Board of Directors of the Exchange or the Nominating and Governance Committee of the Board shall make all materiality determinations under the foregoing two paragraphs. A director shall qualify as a Non-Industry Director only so long as such director meets the requirements for that position.

Directors will serve one-year terms ending on the annual meeting following the meeting at which such directors were elected or at such time as their successors are elected or appointed and qualified, except in the event of earlier death, resignation, disqualification or removal.

Only persons who are nominated as Representative Directors by the Nominating and Governance Committee shall be eligible for election as Representative Directors. The Nominating and Governance Committee shall be bound to accept and nominate the Representative Director nominees recommended by the Representative Director Nominating Body, provided that the Representative Director nominees are not opposed by a petition candidate as forth in Section 3.2 below. If such Representative Director nominees are opposed by a petition candidate then the Nominating and Governance Committee shall be bound to accept and nominate the Representative Director nominees who receive the most votes pursuant to a Run-off Election as set forth in Section 3.2 below.

The Nominating and Governance Committee shall determine, subject to review by the Board, whether a director candidate satisfies the applicable qualifications for election as a director, and the decision of that committee shall, subject to review, if any, by the Board, be final.

Section 3.2. Nomination of Representative Directors.

The Representative Director Nominating Body shall recommend a number of directors that equals 20% of the total number of directors serving on the Board (the "Representative Director(s)"), provided that if 20% of the directors then serving on the Board is not a whole number, such number of Representative Directors shall be rounded up to the next whole number. Directors not recommended by the Representative Director Nominating Body shall be nominated by the Nominating and Governance Committee. Any person nominated by the Representative Director Nominating Body and any petition candidate nominated pursuant to this Section 3.2 shall satisfy the compositional requirements determined by the Board from time to time pursuant to a resolution adopted by the Board in accordance with Section 3.1, designating the number of Representative Directors that are Non-Industry Directors and Industry Directors (if any).

The Representative Director Nominating Body shall provide a mechanism for holders of Trading Permits to provide input to the Representative Director Nominating Body with respect to nominees for the Representative Directors. The Representative Director Nominating Body shall issue a circular to the holders of Trading Permits identifying the Representative Director nominees selected by the Representative Director Nominating Body not earlier than December 1st and not later than January 15th, or the first business day thereafter if January 15th is not a business day.

Holders of Trading Permits may nominate alternative candidates for election to the Representative Director positions to be elected in a given year by submitting a petition signed by individuals representing not less than 10% of the total outstanding Trading Permits at that time. Petitions must be filed with the Secretary no later than 5:00 p.m. (Chicago time) on the 10th business day following the issuance of the circular to the holders of Trading Permits identifying the Representative Director nominees selected by the Representative Director Nominating Body (the "Petition Deadline"). The names of all Representative Director nominees recommended by the Representative Director Nominating Body and those selected pursuant to a valid and timely petition shall, immediately following their selection, be given to the Secretary who shall

promptly issue a circular to all of the Trading Permit Holders identifying all such Representative Director candidates.

If one or more valid petitions are received, the Secretary shall issue a circular to all of the Trading Permit Holders identifying those individuals nominated for Representative Director by the Representative Director Nominating Body and those individuals nominated for Representative Director through the petition process as well as of the time and date of a run-off election to determine which individuals will be nominated as Representative Director(s) by the Nominating and Governance Committee (the "Run-off Election"). The Run-off Election will be held not more than 45 days after the Petition Deadline. In any Run-off Election, each holder of a Trading Permit shall have one vote with respect to each Trading Permit held by such Trading Permit Holder for each Representative Director position to be filled that year; provided, however, that no holder of Trading Permits, either alone or together with its affiliates, may account for more than 20% of the votes cast for a candidate, and any votes cast by a holder of Trading Permits, either alone or together with its affiliates, in excess of this 20% limitation shall be disregarded. Votes may be cast in person or by proxy. Additionally, in any Run-off Election, Trading Permits representing one-third of the total outstanding Trading Permits entitled to vote, when present in person or represented by proxy, shall constitute a quorum for purposes of the Run-off Election. The Secretary shall issue a circular to all of the Trading Permit Holders setting forth the results of the Run-off Election. The number of individual Representative Director nominees equal to the number of Representative Director positions to be filled that year receiving the largest number of votes in the Run-off Election (after taking into account the voting limitation set forth herein) will be the persons approved by the Trading Permit Holders to be nominated as the Representative Director(s) by the Nominating and Governance Committee for that year.

Section 3.3. Powers of the Board.

The Board shall be the governing body of the Corporation and shall be vested with all powers necessary for the management of the business and affairs of the Corporation and for the promotion of its welfare, objects and purposes. The Board shall regulate the business conduct of Trading Permit Holders and may exercise all such powers of the Corporation and do all such lawful acts and things as are not by statute or the Certificate of Incorporation directed or required to be exercised or done by others. In the exercise of such powers, the Board may organize such subsidiary corporations, impose such fees and charges, adopt or amend such Rules, issue such orders and directions, and make such decisions as it deems necessary or appropriate. It may prescribe and impose penalties for violations of the Rules, for neglect or refusal to comply with orders, directions or decisions of the Board, or for any other offenses against the Corporation.

Section 3.4. Resignation, Disqualification and Removal of Directors.

(a) A director may resign at any time by giving written notice of his resignation to the Chairman of the Board or the Secretary, and such resignation, unless specifically contingent upon its acceptance, will be effective as of its date or of the date specified therein.

(b) In the event any Industry Director or Non-Industry Director fails to maintain the qualifications required for such category of director in Section 3.1 hereof, of which failure the Board shall be the sole judge, the term of office of such director shall terminate and such director shall thereupon cease to be a director, his office shall become vacant and, notwithstanding any

provision to the contrary, the vacancy may be filled by the Board with a person who qualifies for the category in which the vacancy exists. Notwithstanding the foregoing, unless otherwise required by statute, the Certificate of Incorporation, regulations of the Securities and Exchange Commission ("SEC") or, if applicable, the regulations of any listing exchange on which the Corporation is listed, a director who fails to maintain the applicable qualifications may be allowed the later of (i) 45 days from the date when the Board determines the director is unqualified or (ii) until the next regular Board meeting following the date when the Board makes such determination, in which to requalify. Following the date when the Board determines the director is unqualified, the director shall be deemed not to hold office and the seat formerly held by the director shall be deemed to be vacant for all purposes. The Board shall be the sole judge of whether the director has requalified. If a director is determined to have requalified, the Board, in its sole discretion, may fill an existing vacancy in the Board or may increase the size of the Board, as necessary, to appoint such director to the Board; provided, however, that the Board shall be under no obligation to return such director to the Board.

(c) No Representative Director may be removed from office by a vote of the stockholders at any time except for cause, which shall include, but not be limited to (i) a breach of a Representative Director's duty of loyalty to the Corporation or its stockholders, (ii) acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) transactions from which a Representative Director derived an improper personal benefit, or (iv) a failure of a Representative Director to be free from a statutory disqualification (as defined in Section 3(a)(39) of the Act). Any Representative Director may be removed for cause by the holders of a majority of the shares of stock then entitled to be voted at an election of directors.

Section 3.5. Filling of Vacancies.

(a) Notwithstanding any provision herein to the contrary, any vacancy in the Board, however occurring, including a vacancy resulting from an increase in the number of the directors, may be filled by vote of a majority of the directors then in office, although less than a quorum, or by a sole remaining director, provided such new director qualifies for the category in which the vacancy exists. A director elected to fill a vacancy shall hold office until the next annual meeting of stockholders, subject to the election and qualification of his or her successor and to his or her earlier death, resignation, disqualification or removal.

(b) If the Board fills a vacancy resulting from a Representative Director position becoming vacant prior to the expiration of such Representative Director's term, or resulting from the creation of an additional Representative Director position required by an increase in the size of the Board, then the Board shall follow the procedures set forth in this Section 3.5(b). In such an event, the Representative Director Nominating Body shall either (i) recommend an individual to the Board to be elected to fill such vacancy or (ii) provide a list of recommended individuals to the Board from which the Board shall elect the individual to fill such vacancy. The Board shall elect, pursuant to this Section 3.5(b), only individuals recommended by the Representative Director Nominating Body; provided, however, the Board shall not be required to take any action or elect any individual if the Board believes that taking such action or electing such individual would be contrary to the Board's fiduciary duties. Any vacancy filled pursuant to this Section 3.5(b), shall be filled by the vote of a majority of the directors then in office, although less than a quorum. The Representative Director Nominating Body shall only recommend individuals to fill

a vacancy in a Representative Director position who satisfy the compositional requirements designated by the Board from time to time pursuant to resolution adopted by the Board in accordance with Section 3.1, designating the number of Representative Directors that are Non-Industry Directors and Industry Directors (if any).

Section 3.6. Chairman of the Board of Directors.

The Board shall appoint one of the directors to serve as Chairman of the Board. Except as provided for in Section 3.7 hereof, the Chairman of the Board shall be the presiding officer at all meetings of the Board and stockholders and shall exercise such other powers and perform such other duties as are delegated to him or her by the Board.

Section 3.7. Lead Director.

The Board may appoint one of the Non-Industry Directors to serve as the Lead Director. The Lead Director shall perform such duties and possess such powers as the Board may from time to time prescribe. The Lead Director, if appointed, shall be authorized to preside at meetings of the directors that are not officers or employees of the Exchange.

Section 3.8. Acting Chairman and Vacancy in Chairman Position.

(a) In the absence or inability to act of the Chairman of the Board, the Board may designate an Acting Chairman of the Board. The Acting Chairman of the Board, in the absence or inability to act of the Chairman, shall be presiding officer at all meetings of the Board and shall exercise such other powers and perform such other duties as are delegated to the Acting Chairman by the Board.

(b) If a vacancy occurs in the office of Chairman, the Board may fill such vacancy by the affirmative vote of at least a majority of the directors then in office.

Section 3.9. Quorum.

At all meetings of the Board, two-thirds of the number of directors then in office shall constitute a quorum for the transaction of business, and the vote of a majority of the directors present at any meeting at which a quorum is present shall be the act of the Board, except as may be otherwise specifically provided by statute or the Certificate of Incorporation. If a quorum shall not be present at any meeting of the Board, a majority of the directors present thereat may adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum shall be present.

Section 3.10. Regular Meetings.

Regular meetings of the Board shall be held at such time and at such place as shall from time to time be determined by the Chairman of the Board with notice of such determination provided to the full Board.

Section 3.11. Special Meetings.

Special meetings of the Board may be called by the Chairman of the Board and shall be called by the Secretary upon the written request of any four directors. The Secretary shall give at least 24 hours notice of such meeting to each director, in a manner permitted by Section 7.1. Every such notice shall state the time and place of the meeting which shall be fixed by the person

calling the meeting, but need not state the purpose thereof except as otherwise required by statute.

Section 3.12. Participation in Meeting.

Members of the Board or of any committee thereof may participate in a meeting of the Board or such committee by conference telephone or other communications equipment by means of which all persons participating in the meeting can hear each other, and such participation in a meeting shall constitute presence in person at such a meeting.

Section 3.13. Action by Written Consent.

Unless otherwise restricted by statute or the Certificate of Incorporation, any action required or permitted to be taken at any meeting of the Board or of any committee thereof may be taken without a meeting if all members of the Board or such committee, as the case may be, consent thereto in writing or by electronic transmission, and the writing or writings or electronic transmission or transmissions are filed with the minutes of proceedings of the Board or of such committee.

Section 3.14. Interested Directors.

No director shall be disqualified from participating in any meeting, action or proceeding of the Board by reason of being or having been a member of a committee which has made prior inquiry, examination or investigation of the subject under consideration. No director shall participate in the adjudication of any matter with respect to which the Board is acting as an adjudicative body under the Rules, and in which such director is personally interested, although interested directors may be counted in determining the presence of a quorum at the meeting of the Board or of a committee which authorizes actions with respect to such matter.

ARTICLE IV Committees

Section 4.1. Designation of Committees.

(a) Committees of the Board. The committees of the Board shall consist of an Executive Committee, a Regulatory Oversight and Compliance Committee, a Nominating and Governance Committee and such other standing and special committees as may be approved by the Board. Except as may be otherwise provided in these Bylaws or as may be otherwise provided for from time to time by resolution of the Board, the Board may, at any time, with or without cause, remove any member of any such committees of the Board.

(b) Committees of the Exchange. The Exchange also shall have such committees as may be provided in these Bylaws or the Rules or as may be from time to time created by the Board. Except as may be otherwise provided in these Bylaws, the Rules or the resolution of the Board establishing any such other committee, the Chief Executive Officer or his or her designee, with the approval of the Board, shall appoint the members of such Exchange committees (other than the committees of the Board) and may designate, with the approval of the Board, a Chairman and a Vice-Chairman thereof. Except as may be otherwise provided in these Bylaws or the Rules, the Chief Executive Officer or his or her designee, with the approval of the Board, may, at any time, with or without cause, remove any member of any such Exchange committees.

Section 4.2. The Executive Committee.

The Executive Committee will include the Chairman of the Board, the Chief Executive Officer (if a director), the Lead Director, if any, at least one Representative Director and such other number of directors that the Board deems appropriate, provided that in no event shall the number of Non-Industry Directors constitute less than the number of Industry Directors serving on the Executive Committee (excluding the Chief Executive Officer from the calculation of Industry Directors for such purpose). Members of the Executive Committee (other than those specified in the immediately preceding sentence) shall be recommended by the Nominating and Governance Committee for approval by the Board. Members of the Executive Committee shall not be subject to removal except by the Board. The Chairman of the Board shall be the Chairman of the Executive Committee. Each member of this Committee shall be a voting member. The members of the Executive Committee shall serve for a term of one year expiring at the first regular meeting of directors following the annual meeting of stockholders each year or until their successors are appointed. The Executive Committee shall have and may exercise all the powers and authority of the Board in the management of the business and affairs of the Corporation, except it shall not have the power and authority of the Board to (i) approve or adopt or recommend to the stockholders any action or matter (other than the election or removal of directors) expressly required by Delaware law to be submitted to stockholders for approval, including without limitation, amending the Certificate of Incorporation, adopting an agreement of merger or consolidation, approving a sale, lease or exchange of all or substantially all of the Corporation's property and assets, or approval of a dissolution of the Corporation or revocation of a dissolution, or (ii) adopt, alter, amend or repeal any bylaw of the Corporation.

Section 4.3. The Nominating and Governance Committee.

The Nominating and Governance Committee shall consist of at least five directors and shall at all times have a majority of directors that are Non-Industry Directors. All members of the committee shall be recommended by the Nominating and Governance Committee for approval by the Board. The exact number of Nominating and Governance Committee members shall be determined from time to time by the Board. Members of the Nominating and Governance Committee shall not be subject to removal except by the Board. The Chairman of the Nominating and Governance Committee shall be recommended by the Nominating and Governance Committee for approval by the Board. Subject to Section 3.2 and Section 3.5 of these Bylaws, the Nominating and Governance Committee shall have the authority to nominate individuals for election as directors of the Corporation. The Nominating and Governance Committee shall have such other duties and may exercise such other authority as may be prescribed by resolution of the Board and the Nominating and Governance Committee Charter as adopted by resolution of the Board. If the Nominating and Governance Committee has two or more Industry Directors, there shall be an Industry-Director Subcommittee consisting of all of the Industry Directors then serving on the Nominating and Governance Committee, which shall act as the Representative Director Nominating Body if and to the extent required by these Bylaws.

Section 4.4. The Regulatory Oversight and Compliance Committee.

The Regulatory Oversight and Compliance Committee shall consist of at least three directors, all of whom shall be Non-Industry Directors and all of whom shall be recommended

by the Non-Industry Directors on the Nominating and Governance Committee for approval by the Board. The exact number of Regulatory Oversight and Compliance Committee members shall be determined from time to time by the Board. Members of the Regulatory Oversight and Compliance Committee shall not be subject to removal except by the Board. The Chairman of the Regulatory Oversight and Compliance Committee shall be recommended by the Non-Industry Directors of the Nominating and Governance Committee for approval by the Board. The Regulatory Oversight and Compliance Committee shall have such duties and may exercise such authority as may be prescribed by resolution of the Board, these Bylaws or the Rules of the Exchange.

Section 4.5. Other.

All other committees shall have such duties and may exercise such authority as may be prescribed for them by the Certificate of Incorporation, these Bylaws or the Rules or by resolution of the Board.

Section 4.6. Conduct of Proceedings.

Unless otherwise provided in the Certificate of Incorporation, these Bylaws, the Rules, the charter of the committee or by the Board of Directors by resolution, each committee may determine the manner in which committee proceedings shall be conducted. In the absence of any such established procedures, each committee shall conduct its business in the same manner as the Board of Directors conducts its business pursuant to Article 3 of these Bylaws. Committees shall keep minutes of their meetings and periodically report their proceedings to the Board and appropriate committees of the Board to the extent requested by the Board or Board committee.

ARTICLE V Officers

Section 5.1. Designation; Number; Election.

(a) The officers of the Corporation shall be a Chief Executive Officer, a President, a Chief Financial Officer, one or more Vice-Presidents (the number thereof to be determined by the Board), a Secretary, a Treasurer, and such other officers as the Board may determine, including an Assistant Secretary and Assistant Treasurer. The Chief Executive Officer shall be appointed by an affirmative vote of the majority of the Board, and may, but need not be the Chairman of the Board. Such affirmative vote may also prescribe his duties not inconsistent with these Bylaws and may prescribe a tenure of office. The remaining officers of the Corporation shall be appointed by the Board, each to serve until a successor has been duly chosen and qualified or until the officer's earlier death, resignation or removal.

(b) Two or more offices may be held by the same person, except the offices of Chief Executive Officer and President. In addition, the Chief Executive Officer and the President may not also be either the Secretary or Assistant Secretary.

Section 5.2. Chief Executive Officer.

The Chief Executive Officer shall, subject to the direction of the Board, have general charge and supervision of the business of the Corporation. The Chief Executive Officer shall be the official representative of the Corporation in all public matters. The Chief Executive Officer shall perform such other duties and possess such other powers as the Board may from time to time

prescribe and that are incident to such office. The Chief Executive Officer shall not engage in any other business during his incumbency except with approval of the Board, and by his acceptance of the office of Chief Executive Officer he shall be deemed to have agreed to uphold these Bylaws.

Section 5.3. President.

The President shall be the chief operating officer of the Corporation and shall perform such duties and possess such powers as the Board or the Chief Executive Officer may from time to time prescribe. In the event of the absence, inability or refusal to act of the Chief Executive Officer, the President shall perform the officer duties of the Chief Executive Officer and, when so performing, shall have all the powers of and be subject to all the restrictions upon the office of Chief Executive Officer.

Section 5.4. Chief Financial Officer.

The Chief Financial Officer shall perform such duties and possess such powers as the Board or the Chief Executive Officer may from time to time prescribe. The Chief Financial Officer shall have the custody of the Corporation's funds and securities; shall keep full and accurate all books and accounts of the Corporation as shall be necessary or desirable in accordance with applicable law or generally accepted accounting principles; shall deposit all monies and other valuable effects in the name and to the credit of the Corporation as may be ordered by the Chief Executive Officer or the Board; shall cause the funds of the Corporation to be disbursed when such disbursements have been duly authorized, taking proper vouchers for such disbursements; and shall render to the Board, at its regular meeting or when the Board so requires, an account of the Corporation.

Section 5.5. Vice Presidents.

Vice Presidents shall perform the duties prescribed by the Board, Chief Executive Officer or President.

Section 5.6. Secretary.

The Secretary shall keep official records of meetings of stockholders and of Trading Permit Holders at which action is taken and of all meetings of the Board; the Secretary shall, in person or by representative, perform like services for the standing and special committees when required; the Secretary shall give notice of meetings of stockholders and of Trading Permit Holders and of special meetings of the Board in accordance with the provisions of the Rules or these Bylaws or as required by statute; the Secretary shall post all notices which may be required to be posted upon the Corporation website; the Secretary shall be custodian of the books, records, and corporate seal of the Corporation and attest, upon behalf of the Corporation, all contracts and other documents requiring authentication; the Secretary shall perform such other duties as may be prescribed by the Board, Chairman of the Board, Chief Executive Officer or President.

Section 5.7. Treasurer.

The Treasurer shall perform such duties and possess such powers as the Board, the Chief Executive Officer or the Chief Financial Officer may from time to time prescribe.

Section 5.8. Removals.

Any officer appointed by the Board may be removed at any time by the Board, the Chief Executive Officer or the President; provided that the Chief Executive Officer can only be removed by the Board. Any such removal shall be without prejudice to the contract rights, if any, of the person so removed. Any vacancies occurring in any office of the Corporation at any time may be filled by the Board or an officer authorized by the Board to appoint a person to hold such office.

Section 5.9. Resignations.

Any officer may resign by delivering such officer's written resignation to the Corporation at its principal office or to the Chief Executive Officer or Secretary. Such resignation shall be effective upon receipt unless it is specified to be effective at some other time or upon the happening of some other event.

Section 5.10. Vacancies.

The Board may fill any vacancy occurring in any office for any reason and may, in its discretion, leave unfilled for such period as it may determine any offices other than those of Chief Executive Officer, President, Secretary and Treasurer. Any vacancies occurring in any office of the Corporation at any time also may be filled by an officer authorized by the Board to appoint a person to hold such office. Each such successor shall hold office until such officer's successor is elected and qualified, or until such officer's earlier death, resignation or removal.

Section 5.11. Salaries.

Officers of the Corporation shall be entitled to such salaries, compensation or reimbursement as shall be fixed or allowed from time to time by the Board unless otherwise delegated to a Committee of the Board or to members of senior management. No officer shall be prevented from receiving such salary by reason of the fact that the officer is also a director of the Corporation.

ARTICLE VI Advisory Board

Section 6.1. Advisory Board.

The Board will establish an Advisory Board which shall advise the Board and management regarding matters of interest to Trading Permit Holders. It shall consist of such number of members as set by the Board from time to time, including at least two members who are Trading Permit Holders or persons associated with Trading Permit Holders. The Chief Executive Officer, or his or her designee, shall be the Chairman of the Advisory Board. The members of the Advisory Board shall be recommended by the Nominating and Governance Committee for approval by the Board. There shall be a Trading Permit Holders Subcommittee of the Advisory Board consisting of all members of the Advisory Board who are Trading Permit Holders or persons associated with Trading Permit Holders, which shall act as the Representative Director Nominating Body if and to the extent required by these Bylaws.

ARTICLE VII Notices

Section 7.1. Notices.

Except as provided in Section 7.2 and to the extent permitted by law, any notice required to be given by the Bylaws or the Rules or otherwise shall be deemed to have been given:

- (a) in person upon delivery of the notice in person to the Person to whom such notice is addressed;
- (b) by mail upon deposit of the notice in the United States mail, enclosed in a postage prepaid envelope;
- (c) by messenger or overnight courier service upon provision of the notice to the messenger or courier service, provided that the delivery method does not require payment of the messenger or courier service fee to deliver the notice by the Person to whom the notice is addressed;
- (d) by facsimile machine upon acknowledgment by the facsimile machine used to transmit the notice of the successful transmission of the notice;
- (e) by electronic mail upon electronic transmission of the notice; and
- (f) by telephone when received.

Any such notice must be addressed to its intended recipient at the intended recipient's address (including the intended recipient's business or residence address, facsimile number, electronic address, or telephone number, as applicable) as it appears on the books and records of the Corporation, or if no address appears on such books and records, then at such address as shall be otherwise known to the Secretary, or if no such address appears on such books and records, then in care of the registered agent of the Corporation in the State of Delaware. In the event that a notice is not provided in conformity with the provisions of this Section 7.1, the notice will be deemed to have been given to its intended recipient upon any receipt of the notice by its intended recipient.

Section 7.2. Electronic Notice to Stockholders.

Whenever any notice whatsoever is required to be given in writing to any stockholder by law, by the Certificate of Incorporation or by these Bylaws, such notice may be given by a form of electronic transmission if the stockholder to whom such notice is given has previously consented to the receipt of notice by electronic transmission.

Section 7.3. Waiver of Notice.

Whenever notice is required to be given under the provisions of any statute, the Certificate of Incorporation, these Bylaws, the Rules or otherwise, a written waiver thereof, signed by the Person entitled to notice, or his proxy, whether before or after the time stated therein shall be deemed equivalent to notice. Except as may be otherwise specifically provided by statute, any waiver by mail, messenger, overnight courier, facsimile machine, or electronic mail, bearing the name of the Person entitled to notice shall be deemed a written waiver duly signed. Attendance of a Person at a meeting, including attendance by proxy, shall constitute a waiver of notice of such meeting except when the Person attends a meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business the meeting is not lawfully called or convened. Except as required by statute or the Certificate of Incorporation, neither the

business to be transacted at, nor the purpose of, any regular or special meeting of the stockholders, directors or any committee need be specified in any written waiver of notice.

ARTICLE VIII General Provisions

Section 8.1. Fiscal Year.

Except as otherwise determined from time to time by the Board, the fiscal year of the Corporation ends on the close of business on December 31 of each year.

Section 8.2. Checks, Drafts and Other Instruments.

All checks, drafts or other orders for the payment of money, notes or other evidences of indebtedness issued in the name of the Corporation shall be signed by such officer or officers, or by such agent or agents of the Corporation and in such manner as the Board may from time to time determine.

Section 8.3. Corporate Seal.

The corporate seal, if any, shall be in such form as shall be approved by the Board or an officer of the Corporation.

Section 8.4. Voting Securities.

Except as the Board may otherwise designate, the Chairman of the Board, Chief Executive Officer, Chief Financial Officer or Treasurer may waive notice of, and act as, or appoint any person or persons to act as, proxy or attorney-in-fact for the Corporation (with or without power of substitution) at, any meeting of stockholders or shareholders of any other corporation or organization, the securities of which may be held by this Corporation.

Section 8.5. Evidence of Authority.

A certificate by the Secretary, or Assistant Secretary, if any, as to any action taken by the stockholders, directors, a committee or any officer or representative of the Corporation shall, as to all Persons who rely on the certificate in good faith, be conclusive evidence of such action.

Section 8.6. Certificate of Incorporation.

All references in these Bylaws to the Certificate of Incorporation shall be deemed to refer to the Certificate of Incorporation of the Corporation, as amended, altered or restated and in effect from time to time.

Section 8.7. Transactions with Interested Parties.

No contract or transaction between the Corporation and one or more of the directors or officers, or between the Corporation and any other corporation, limited liability company, partnership, association or other organization in which one or more of the directors or officers are directors, managers or officers, or have a financial interest, shall be void or voidable solely for this reason, or solely because the director or officer is present at or participates in the meeting of the Board or a committee of the Board which authorizes the contract or transaction or solely because his, her or their votes are counted for such purpose, if:

(a) The material facts as to his, her or their relationship or interest and as to the contract or transaction are disclosed or are known to the Board or the committee, and the Board or committee in good faith authorizes the contract or transaction by the affirmative votes of a majority of the disinterested directors, even though the disinterested directors be less than a quorum;

(b) The material facts as to his, her or their relationship or interest and as to the contract or transaction are disclosed or are known to the stockholders entitled to vote thereon, and the contract or transaction is specifically approved in good faith by vote of the stockholders; or

(c) The contract or transaction is fair as to the Corporation as of the time it is authorized, approved or ratified by the Board, a committee of the Board or the stockholders.

Both (i) directors who are directors of both the Corporation and a party with whom the Corporation may be engaged in a transaction and (ii) interested directors may be counted in determining the presence of a quorum at a meeting of the Board or of a committee at which the contract or transaction is authorized.

Section 8.8. Severability.

Any determination that any provision of these Bylaws is for any reason inapplicable, illegal or ineffective shall not affect or invalidate any other provision of these Bylaws.

Section 8.9. Pronouns.

All pronouns used in these Bylaws shall be deemed to refer to the masculine, feminine or neuter, singular or plural, as the identity of the person or persons may require.

Section 8.10. Contracts.

In addition to the powers otherwise granted to officers pursuant to Article V hereof, the Board may authorize any officer or officers, or any agent or agents, of the Corporation to enter into any contract or to execute and deliver any instrument in the name of and on behalf of the Corporation, and such authority may be general or confined to specific instances.

Section 8.11. Loans.

The Corporation may, to the extent permitted by applicable law, lend money to, or guarantee any obligation of, or otherwise assist any officer or other employee of the Corporation or of its subsidiaries, including any officer or employee who is a director of the Corporation or its subsidiaries, whenever, in the judgment of the directors, such loan, guaranty or assistance may reasonably be expected to benefit the Corporation. The loan, guaranty or other assistance may

include, without limitation, a pledge of shares of stock of the Corporation. Nothing in this Section 8.11 shall be deemed to deny, limit or restrict the powers of guaranty or warranty of the Corporation at common law or under any statute.

Section 8.12. Books and Records.

Subject to applicable law, the Board shall have power from time to time to determine to what extent and at what times and places and under what conditions and regulations the accounts and books of the Corporation, or any of them, shall be open to the inspection of the stockholders; and no stockholder shall have any right to inspect any account or book or document of the Corporation, except as conferred by the laws of the State of Delaware. The Corporation shall keep its books and records within the United States. Any books or records of the Corporation may be kept on, or be in the form of, magnetic tape, computer disk, or any other information storage device, provided that the records so kept can be converted into clearly legible form within a reasonable time.

Section 8.13. Section Headings.

Section headings in these Bylaws are for convenience of reference only and shall not be given any substantive effect in limiting or otherwise construing any provision herein.

Section 8.14. Inconsistent Provisions.

In the event that any provision of these Bylaws is or becomes inconsistent with any provision of the Certificate of Incorporation, the General Corporation Law of the State of Delaware ("DGCL") or any other applicable law, the provision of these Bylaws shall not be given any effect to the extent of such inconsistency but shall otherwise be given full force and effect.

ARTICLE IX Amendments

Section 9.1. By the Board.

These Bylaws may be altered, amended or repealed, or new Bylaws may be adopted, by the Board.

Section 9.2. By the Stockholders.

These Bylaws may be altered, amended or repealed or new Bylaws may be adopted by the affirmative vote of the majority of the stockholders present at any annual meeting of the stockholders at which a quorum is present.

Section 9.3. SEC Approval.

Before any amendment to, alteration or repeal of any provision of the Bylaws of the Corporation under this Article IX shall be effective, those changes shall be submitted to the Board and if the same must be filed with or filed with and approved by the SEC, then the proposed changes to the Bylaws of the Corporation shall not become effective until filed with or filed with and approved by the SEC, as the case may be.

ARTICLE X Rulemaking

Section 10.1. Rulemaking.

The Board may, by the affirmative vote of a majority of a quorum of the Board, alter, adopt, amend or repeal as it may deem necessary or proper any of the Corporation's Rules, which shall not become effective until filed with or filed with and approved by the SEC, as the case may be.

Z Cboe Building Corporation

Delaware

The First State

Page 1

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE RESTATED CERTIFICATE OF "CHICAGO OPTIONS EXCHANGE BUILDING CORPORATION", CHANGING ITS NAME FROM "CHICAGO OPTIONS EXCHANGE BUILDING CORPORATION" TO "CBOE BUILDING CORPORATION", FILED IN THIS OFFICE ON THE SEVENTEENTH DAY OF OCTOBER, A.D. 2017, AT 12:24 O'CLOCK P.M.

A FILED COPY OF THIS CERTIFICATE HAS BEEN FORWARDED TO THE NEW CASTLE COUNTY RECORDER OF DEEDS.



897245 8100
SR# 20176652047

You may verify this certificate online at corp.delaware.gov/authver.shtml

A handwritten signature in black ink, appearing to read "JBullock", is written over a horizontal line. Below the line, the text "Jeffrey W. Bullock, Secretary of State" is printed.

Jeffrey W. Bullock, Secretary of State

Authentication: 203410899
Date: 10-17-17

AMENDED AND RESTATED
CERTIFICATE OF INCORPORATION

OF
CHICAGO OPTIONS EXCHANGE BUILDING CORPORATION

The corporation filed its original Certificate of Incorporation with the Secretary of State of the State of Delaware on August 8, 1980. This Amended and Restated Certificate of Incorporation of the corporation, which restates and integrates and also further amends the provisions of the corporation's Certificate of Incorporation, was duly adopted in accordance with the provisions of Sections 242 and 245 of the General Corporation Law of the State of Delaware and by the written consent of its sole stockholder in accordance with Section 228 of the General Corporation Law of the State of Delaware. The Certificate of Incorporation of the corporation is hereby amended, integrated and restated to read in its entirety as follows:

FIRST: The name of the corporation is Cboe Building Corporation.

SECOND: The address of the registered office of the corporation in the State of Delaware is Corporation Trust Center, 1209 Orange Street, in the City of Wilmington, County of New Castle, Delaware 19801-1297. The name of the registered agent of the corporation at this address is The Corporation Trust Company.

THIRD: The purpose of the corporation is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law of the State of Delaware.

FOURTH: The total number of shares of stock that the corporation is authorized to issue is one (1) share of common stock, having a par value of one dollar (\$1).

FIFTH: The business and affairs of the corporation shall be managed by the board of directors, who need not be elected by ballot unless required by the by-laws of the corporation.


SIXTH: In furtherance and not in limitation of the powers conferred by the laws of the State of Delaware, the directors are expressly authorized to adopt, amend or repeal the by-laws.

SEVENTH: The corporation reserves the right to amend and repeal any provision contained in this Certificate of Incorporation in the manner prescribed by the laws of the State of Delaware. All rights conferred are granted subject to this reservation.

[Signature page follows]

IN WITNESS WHEREOF, Chicago Options Exchange Building Corporation has caused this certificate to be signed as of this 17th day of October, 2017.

**CHICAGO OPTIONS EXCHANGE BUILDING
CORPORATION**

By: 
Name: Chris Concannon
Its: President

AA CBOE, LLC

BB CBOE III, LLC

CC Cboe Bats, LLC

Delaware

The First State

Page 1

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF
DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT
COPY OF THE RESTATED CERTIFICATE OF "CBOE V, LLC", CHANGING ITS
NAME FROM "CBOE V, LLC" TO "CBOE BATS, LLC", FILED IN THIS
OFFICE ON THE SIXTEENTH DAY OF OCTOBER, A.D. 2017, AT 9:59
O`CLOCK P.M.




Jeffrey W. Bullock, Secretary of State

6152929 8100
SR# 20176643033

You may verify this certificate online at corp.delaware.gov/authver.shtml

Authentication: 203408829
Date: 10-17-17

AMENDED AND RESTATED
CERTIFICATE OF FORMATION
OF
CBOE V, LLC

The limited liability company filed its original Certificate of Formation with the Secretary of State of the State of Delaware on September 23, 2016 under the name CBOE V, LLC. This Amended and Restated Certificate of Formation of the limited liability company, which restates and integrates and also further amends the provisions of the limited liability company's Certificate of Formation, has been duly executed and is being filed in accordance with the Delaware Limited Liability Company Act (6 Del. C. § 18-208). The Certificate of Formation of the limited liability company is hereby amended, integrated and restated in its entirety to read as follows:

1. The name of the limited liability company is Cboe Bats, LLC.
2. The address of the registered office of the limited liability company in the State of Delaware is Corporation Trust Center, 1209 Orange Street, Wilmington, New Castle County, Delaware 19801. The name of its registered agent at such address is The Corporation Trust Company.
3. The limited liability company shall provide indemnification for members of its board of directors (the "Board of Directors"), members of committees of the Board of Directors and of other committees of the limited liability company, and its officers, and the limited liability company may provide indemnification for its agents and employees, and those serving another corporation, partnership, joint venture, trust or other enterprise at the request of the limited liability company, in each case to the maximum extent permitted by the Delaware Limited Liability Company Act (6 Del. C. §18-101 et seq.) (the "LLC Act"); *provided, however*, that the limited liability company may limit the extent of such indemnification by individual contracts with its directors and officers; and, *provided, further*, that the limited liability company shall not be required to indemnify any person in connection with any proceeding (or part thereof) initiated by such person or any proceeding by such person against the limited liability company or its directors, officers, employees or other agents unless (i) such indemnification is expressly required to be made by law, (ii) the proceeding was authorized by the Board of Directors or (iii) such indemnification is provided by the limited liability company, in its sole discretion, pursuant to the powers vested in the limited liability company under the LLC Act.

[Signature page follows]

IN WITNESS WHEREOF, the undersigned has caused this Amended and Restated Certificate of Formation of CBOE V, LLC to be executed as of this 16th day of October, 2017.

CBOE V, LLC

By: 

Name: Edward T. Tilly

Title: Chief Executive Officer

DD CBOE Livevol, LLC

EE Cboe UK Limited



**CERTIFICATE OF INCORPORATION
ON CHANGE OF NAME**

Company Number 10056491

The Registrar of Companies for England and Wales hereby certifies that under the Companies Act 2006:

CBOE UK LTD

a company incorporated as private limited by shares, having its registered office situated in England and Wales, has changed its name to:

CBOE UK LIMITED

Given at Companies House on **17th October 2017**.

The above information was communicated by electronic means and authenticated by
the Registrar of Companies under section 1115 of the Companies Act 2006



Companies House



**THE OFFICIAL SEAL OF THE
REGISTRAR OF COMPANIES**

FF CBOE Vest, LLC

GG Loan Markets, LLC

HH Cboe Data Services, LLC

Delaware

The First State

Page 1

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE RESTATED CERTIFICATE OF "MARKET DATA EXPRESS, LLC", CHANGING ITS NAME FROM "MARKET DATA EXPRESS, LLC" TO "CBOE DATA SERVICES, LLC", FILED IN THIS OFFICE ON THE SEVENTEENTH DAY OF OCTOBER, A.D. 2017, AT 12:26 O'CLOCK P.M.




Jeffrey W. Bullock, Secretary of State

4113001 8100
SR# 20176652050

You may verify this certificate online at corp.delaware.gov/authver.shtml

Authentication: 203410924
Date: 10-17-17

AMENDED AND RESTATED
CERTIFICATE OF FORMATION
OF
MARKET DATA EXPRESS, LLC

The limited liability company filed its original Certificate of Formation with the Secretary of State of the State of Delaware on February 21, 2006 under the name Market Data Express, LLC. This Amended and Restated Certificate of Formation of the LLC, which restates and integrates and also further amends the provisions of the limited liability company's Certificate of Formation, has been duly executed and is being filed in accordance with the Delaware Limited Liability Company Act (6 Del. C. § 18-208). The Certificate of Formation of the limited liability company is hereby amended, integrated and restated in its entirety to read as follows:

1. The name of the limited liability company is Cboe Data Services, LLC.
2. The address of its registered office in the State of Delaware is Corporation Trust Center, 1209 Orange Street, in the City of Wilmington, County of New Castle, 19801. The name of its registered agent at such address is The Corporation Trust Company.
3. This Certificate of Formation shall be effective upon the date of filing.

[Signature page follows]

IN WITNESS WHEREOF, the undersigned has caused this Amended and Restated Certificate of Formation of Market Data Express, LLC to be executed as of this 16th day of October, 2017.

MARKET DATA EXPRESS, LLC

By: 

Name: Edward T. Tilly

Title: Chief Executive Officer

II Signal Trading Systems, LLC

JJ The Options Exchange, Incorporated

KK Vest Financial Group, Inc.

LL Cboe Hong Kong Limited

編號 2540000

No.



公司註冊處
COMPANIES REGISTRY

公司更改名稱證明書
CERTIFICATE OF CHANGE OF NAME

本人謹此證明
I hereby certify that

CBOE Hong Kong Limited

已藉特別決議更改其名稱，該公司根據
having by special resolution changed its name, is now incorporated under the

香港法例第622章《公司條例》註冊的名稱現為
Companies Ordinance (Chapter 622 of the Laws of Hong Kong) in the name of

Cboe Hong Kong Limited

本證明書於二〇一七年十月十七日發出。

Issued on 17 October 2017.

香港特別行政區公司註冊處處長鍾麗玲

Ms Ada L L CHUNG

Registrar of Companies
Hong Kong Special Administrative Region

註 Note:

公司名稱獲公司註冊處註冊，並不表示獲授予該公司名稱或其任何部分的商標權或任何其他知識產權。

Registration of a company name with the Companies Registry does not confer any trade mark rights or any other intellectual property rights in respect of the company name or any part thereof.

編號 2540000

No.



公司註冊處
COMPANIES REGISTRY

公司更改名稱證明書
CERTIFICATE OF CHANGE OF NAME

本人謹此證明
I hereby certify that

CBOE Hong Kong Limited

已藉特別決議更改其名稱，該公司根據
having by special resolution changed its name, is now incorporated under the

香港法例第622章《公司條例》註冊的名稱現為
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Cboe Hong Kong Limited

本證明書於二〇一七年十月十七日發出。

Issued on 17 October 2017.

香港特別行政區公司註冊處處長鍾麗玲

Ms Ada L L CHUNG

Registrar of Companies
Hong Kong Special Administrative Region

註 Note:

公司名稱獲公司註冊處註冊，並不表示獲授予該公司名稱或其任何部分的商標權或任何其他知識產權。

Registration of a company name with the Companies Registry does not confer any trade mark rights or any other intellectual property rights in respect of the company name or any part thereof.

Exhibit F

Exhibit Request:

A complete set of all forms pertaining to:

1. Application for membership, participation or subscription to the entity,
2. Application for approval as a person associated with a member, participant or subscriber of the entity, and
3. Any other similar materials.

Response:

Attached please find the following documents:

1. Membership Application, including Checklist, Statutory Disqualification Notice and Clearing Letter of Guarantee
2. User Agreement
3. Securities Routing Agreement
4. Market Maker Registration Application and User Agreement Addendum for Registered Market Makers
5. User Agreement Addendum to Permit Volume Attribution
6. Volume Aggregation and Execution Detail Request
7. Direct Debit Opt-In Form
8. Non-Member Clearing Firm Information Document
9. Sponsored Access Application, including Checklist and Information Document, Sponsoring Member Consent and Sponsored Participant Agreement
10. Service Bureau Information Document, Service Bureau Port Fee Agreement and Service Bureau Agreement
11. Connectivity Services Agreement, Extranet Addendum to the Connectivity Services Agreement and Cboe Connect Order Form
12. Data Agreement, Data Feed Order Form and System Description, List of Affiliates, Subscriber Agreement, Service Facilitator List, External Controlled Data Distributor Trial Addendum, U.S. Market Data Policies

The Exchange intends to use Form U-4, the Uniform Application for Securities Industry Registration or Transfer, for persons applying to be associated persons of a Member.

Membership Application

In order to join Cboe BZX Exchange, Inc., Cboe BYX Exchange, Inc., Cboe EDGA Exchange, Inc., and Cboe EDGX Exchange, Inc. (each, an "Exchange"), an applicant Broker-Dealer ("Applicant") must complete and submit all materials listed on the Application Checklist below via email to MembershipServices@bats.com.

Applicants are required to update any information submitted in this application when and if it becomes inaccurate or incomplete after submission.

APPLICATION CHECKLIST
<input type="checkbox"/> Membership Application, including Statutory Disqualification Notice
<input type="checkbox"/> Clearing Letter of Guarantee (only if you are not self-clearing) – per Exchange
<input type="checkbox"/> User Agreement – per Exchange
<input type="checkbox"/> Securities Routing Agreement – per Exchange
<input type="checkbox"/> Most recent signed and notarized Form BD, including schedules and disclosure reporting pages
<input type="checkbox"/> A Form U-4 for each officer, director and equity holder who owns 5% or more of Applicant's outstanding equity interests, if not available on WebCRD®
<input type="checkbox"/> Most recent audited annual financial statements, including Independent Auditors' Report on Internal Control or Exemption Report, and unaudited financial statements as of the last month end
<input type="checkbox"/> All FOCUS Reports filed since the last annual audit
<input type="checkbox"/> Organizational Documents: Articles of Incorporation and Bylaws; Partnership Agreement; Limited Liability Company Agreement or Operating Agreement; or similar documentation
<input type="checkbox"/> IRS Form <u>W-9</u> or <u>W-8</u>
<input type="checkbox"/> A list of all Authorized Traders, including name and CRD # , the Applicant will be registering with the Exchange
<input type="checkbox"/> A list identifying all joint accounts pursuant to Exchange Rule 12.7 – <i>if applicable</i>

Note: All application materials sent to the Exchange will be reviewed for completeness. All applications are deemed confidential and are handled in a secure environment. Applications may, however, be shared with other self-regulatory organizations (e.g., FINRA), as necessary, to evaluate and process the application.

The Exchange may request applicants to submit documentation in addition to what is listed in the Application Checklist during the application review process, pursuant to Exchange Rule 2.6. If you have questions on completing the application, you may direct them to Membership Services at MembershipServices@bats.com or 913.815.7002. In addition, please refer to the Exchange's website at www.bats.com for additional information regarding the membership process.

Membership Application

GENERAL INFORMATION		
Date:	CRD #:	
Name of Applicant:		
Address of Principal Office:		
City:	State:	Zip:
BILLING ADDRESS		
Address of Billing Office:		
City:	State:	Zip:
BUSINESS CONTACT	BILLING CONTACT	
Name:	Name:	
Title:	Title:	
CRD #:	CRD #:	
Email:	Email:	
Phone:	Phone:	
COMPLIANCE CONTACT	TECHNICAL CONTACT	
Name:	Name:	
Title:	Title:	
CRD #:	CRD #:	
Email:	Email:	
Phone:	Phone:	
TRADING CONTACT	SUPERVISOR OF AUTHORIZED TRADERS	
Name:	Name:	
Title:	Title:	
CRD #:	CRD #:	
Email:	Email:	
Phone:	Phone:	
TYPE OF ORGANIZATION		
<div style="display: flex; justify-content: space-between;"> <input type="checkbox"/> Corporation <input type="checkbox"/> Limited Liability Company <input type="checkbox"/> Partnership <input type="checkbox"/> Sole Proprietorship </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> State of Organization: _____ Federal Employer ID Number: _____ </div>		
TYPE OF BUSINESS ACTIVITIES CONDUCTED BY APPLICANT (check all that apply)		
<div style="display: flex; justify-content: space-between;"> <input type="checkbox"/> Market Maker* <input type="checkbox"/> Public Customer Business <input type="checkbox"/> Clearing Services <input type="checkbox"/> Firm Proprietary Trading </div> <div style="margin-top: 10px;"> <input type="checkbox"/> Other: _____ </div>		
<small>*Please contact Membership Services for more information on becoming a Market Maker on the Exchange.</small>		

OTHER SELF-REGULATORY ORGANIZATION MEMBERSHIPS (check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> BOX Options Exchange, LLC | <input type="checkbox"/> ISE Mercury, LLC |
| <input type="checkbox"/> Cboe BZX Exchange, Inc. | <input type="checkbox"/> Investors Exchange, LLC |
| <input type="checkbox"/> Cboe BYX Exchange, Inc. | <input type="checkbox"/> Miami International Securities Exchange, LLC |
| <input type="checkbox"/> Cboe C2 Exchange, Inc. | <input type="checkbox"/> MIAX PEARL, LLC |
| <input type="checkbox"/> Cboe EDGA Exchange, Inc. | <input type="checkbox"/> NASDAQ Stock Market, LLC |
| <input type="checkbox"/> Cboe EDGX Exchange, Inc. | <input type="checkbox"/> NASDAQ OMX BX, Inc. |
| <input type="checkbox"/> Cboe Exchange, Inc. | <input type="checkbox"/> NASDAQ OMX PHLX, LLC |
| <input type="checkbox"/> Chicago Stock Exchange, Inc. | <input type="checkbox"/> New York Stock Exchange, LLC |
| <input type="checkbox"/> Financial Industry Regulatory Authority | <input type="checkbox"/> NYSE American, LLC |
| <input type="checkbox"/> International Securities Exchange, LLC | <input type="checkbox"/> NYSE Arca, Inc. |
| <input type="checkbox"/> ISE Gemini, LLC | <input type="checkbox"/> NYSE National, Inc. |

Name of Applicant's Designated Examining Authority (DEA): _____

ADDITIONAL INFORMATION

State approximate dates of last inspection of Applicant's books and records by the SEC, FINRA or any other Regulator.

SEC: _____

FINRA: _____

Other Regulator: _____ Name of Other Regulator: _____

If any material deficiencies were revealed, please explain (attach an additional sheet if more space is needed):

Discuss any recent events or changes that are not reflected in the Applicant's Form BD and U-4(s) (and amendments thereto) that are submitted with this Application (attach an additional sheet if more space is needed):

Has Applicant during the past three years been subject to the notification and reporting requirements under SEC Rule 17-a-11 because of a net capital or record keeping problem?

☐ Yes ☐ No

If yes, please explain (attach an additional sheet if more space is needed):

Does Applicant carry a Broker's Blanket and Fidelity Bond? ☐ Yes ☐ No

If yes, please provide the following:

Name of insurance carrier: _____

Amount of coverage: _____ Effective date of the bond: _____

AML COMPLIANCE OFFICER

Pursuant to Exchange Rule 5.6, each Member is required to designate, and identify to the Exchange, a person or persons responsible for implementing and monitoring the day-to-day operations and internal controls of the Member's anti-money laundering program. A Member must provide prompt notice to the Exchange regarding any change in this designation. If Applicant is a Member of FINRA required to comply with FINRA Rule 3310 (formerly NASD Rule 3011), notification of changes to this designation need not be filed with the Exchange if the Member complies with such FINRA Rule.

Name:

Title:

Business Address:

Phone:

Fax:

Email:

PRINCIPAL REGISTRATION

The Exchange requires each Member other than a sole proprietorship or a proprietary trading firm with 25 or fewer Authorized Traders ("Limited Size Proprietary Firm") to register at least two (2) Series 24 qualified Principals. A Limited Size Proprietary Firm is required to register at least one (1) Series 24 qualified Principal. A "Principal" is any individual responsible for supervising the activities of a Member's Authorized Traders and each person designated as a Chief Compliance Officer on Schedule A of Form BD. In addition, the Exchange requires each Member to register a Series 27 qualified FINOP with the Exchange. See Exchange Rule 2.5, Interpretation and Policy .01 for additional information regarding principal registration. Please indicate below the individuals that the Member intends to register with the Exchange, to comply with these requirements.

DESIGNATED SERIES 24 LICENSED PRINCIPAL

Name:

Title:

CRD #:

Business Address:

Phone:

Email:

DESIGNATED SERIES 24 LICENSED PRINCIPAL

Name:

Title:

CRD #:

Business Address:

Phone:

Email:

DESIGNATED SERIES 27 LICENSED PRINCIPAL

Name:

Title

CRD #:

Business Address:

Phone:

Email:

[Remainder of page intentionally left blank.]

The undersigned represents that the information and statements contained herein, including exhibits attached hereto, are current, true and complete.

By executing this Application, the undersigned agrees as follows:

- (1) To abide by, comply with, and adhere to the provisions of the Exchange's Certificate of Incorporation, its By-Laws, the Exchange Rules, the policies, interpretations and guidelines of the Exchange and all orders and decisions of the Exchange's Board of Directors and penalties imposed by the Board of Directors, and any duly authorized committee (such agreement is not to be construed as a waiver by the undersigned of any right to appeal provided in the Securities Exchange Act of 1934, as amended);
- (2) To pay such dues, fees, assessments, and other charges in the manner and amount as shall from time to time be fixed by the Exchange.
- (3) The Exchange and its officers, employees and members of its Board of Directors and of any Exchange committee shall not be liable, except for willful malfeasance, to the Applicant or to any other person, for any action taken by such director, officer, or member in his official capacity, or by any employee of the Exchange while acting within the scope of his employment, in connection with the administration or enforcement of any of the provisions of the Certificate of Incorporation, By-Laws, Exchange Rules, policies, interpretations or guidelines of the Exchange or any penalty imposed by the Exchange, its Board of Directors or any duly authorized committee;
- (4) In cases where the Applicant fails to prevail in a lawsuit or administrative adjudicative proceeding instituted by the Applicant against the Exchange of any of its officers, directors, committee members, employees or agents, to pay the Exchange or any of its officers, directors, committee members, employees or agents, all reasonable expenses, including attorneys' fees, incurred by the Exchange in the defense of such proceeding, but only in the event that such expenses exceed Fifty Thousand Dollars (\$50,000.00), provided that such payment obligation shall not apply to internal disciplinary actions by the Exchange or administrative appeals;
- (5) To maintain and make available to the Exchange, its authorized employees and its Board of Directors or committee members such books and records as may be required to be maintained by the Securities and Exchange Commission or Exchange Rules; and
- (6) To provide such other reasonable information with respect to the Applicant as the Exchange may require.

Applicant Broker-Dealer acknowledges its obligation to update any and all information contained in any part of this application, including termination of membership with another SRO, which may cause a change in the Applicant Broker-Dealer's DEA. It is understood that in that event, additional information may be required by the Exchange.

Signature of Authorized Officer, Partner, Managing
Member or Sole Proprietor

Date

Printed Name

Title

Statutory Disqualification Notice

Pursuant to the Securities Exchange Act of 1934, as amended (the "Act"), the Exchange may deny (or may condition) membership or may bar a natural person from becoming associated (or may condition an association) with a Member for the same reasons that the Securities and Exchange Commission may deny or revoke a broker-dealer registration under the Act. The Act provides for Statutory Disqualification if a person has:

- Been expelled, barred or suspended from membership in or being associated with a member of a self regulatory organization;
- Had broker, dealer or similar privileges denied or suspended or caused such denial or suspension of another;
- Violated any provision of the Act; or
- Been convicted of a theft or securities related misdemeanor or any felony within ten (10) years of the date of applying for membership status or becoming an Associated Person.

☐ Check here if you **DO NOT** have person(s) associated with the Applicant Broker-Dealer who is or may be subject to Statutory Disqualification.

☐ Check here if you **DO** have person(s) associated with the Applicant Broker-Dealer who is or may be subject to Statutory Disqualification.*

Please identify any such person(s) associated with the Applicant Broker-Dealer who is or may be subject to Statutory Disqualification. Additionally, identify any such person(s) who are associated with the Applicant Broker-Dealer and who have been approved for association or continued association by another SRO due to a Statutory Disqualification.

* Attach a sheet identifying any such person(s), including the following information:

1. Name and social security number of the person(s).
2. Copies of documents relating to the Statutory Disqualification.
3. Description of each such person's duties (for non-registered individuals, this should include a statement indicating if the position allows access to books, records, funds or securities).
4. Explanation of action taken or approval given by any other SRO regarding each person.

On behalf of Applicant Broker-Dealer, I hereby attest and affirm that I have read and understand the above and the attached information, and that the answers and the information provided (including copies of any documents) are true and complete to the best of my knowledge. I acknowledge that the Exchange shall rely on the information provided pursuant to this Notice in order to approve or deny Applicant Broker-Dealer's application for membership. I understand that Applicant Broker-Dealer will be subject to a disciplinary action if false or misleading answers are given pursuant to this Notice. I also acknowledge the obligation of Applicant Broker-Dealer to submit to the Exchange any amendment to any document submitted as part of its application, including but not limited to this Notice, within ten (10) business days of such amendment or change.

Signature of Authorized Officer, Partner, Managing
Member or Sole Proprietor

Date

Printed Name

Title

Cboe EDGA Exchange, Inc.
Clearing Letter of Guarantee

NOTICE OF CONSENT – To be completed by Clearing Firm of Applicant Broker-Dealer

In connection with the qualification of _____ (“Member”) as a member of Cboe EDGA Exchange, Inc. (“Exchange”) and pursuant to Exchange Rule 11.13, as may be amended or re-numbered from time to time, the undersigned Clearing Firm represents that it is a member of the National Securities Clearing Corporation (“NSCC”), a clearing agency registered with the Securities Exchange Commission pursuant to Section 17A of the Securities Exchange Act of 1934. The undersigned Clearing Firm accepts full responsibility for clearing and settling any and all transactions made by the Member and/or such persons having access to the Exchange pursuant to a sponsorship arrangement with the Member to the extent such transactions are executed on the Exchange or on other markets after being routed away from the Exchange.

This section shall be deemed a letter of guarantee, letter of authorization, or notice of consent pursuant to Exchange Rules and may be relied upon by Exchange. This Notice of Consent shall be subject to Exchange Rules, as amended from time to time, and shall remain in effect until revoked in writing by the Clearing Firm.

Clearing Firm (Broker-Dealer Name)

NSCC Clearing #

Signature of Authorized Officer, Partner or Managing
Member or Sole Proprietor of Clearing Firm

Printed Name/Title

Date

Cboe EDGA Exchange, Inc.

User Agreement

This User Agreement (this "Agreement"), with an effective date as of the date executed on the signature page hereof, is made by and between Cboe EDGA Exchange, Inc., a Delaware corporation, with its principal offices at 8050 Marshall Drive, Suite 120, Lenexa, Kansas 66214 ("Exchange"), and the user referenced below ("User").

- 1. Term of the Agreement.** This Agreement will continue until terminated pursuant to the terms of this Agreement.
- 2. Services.** Subject to the terms and conditions of this Agreement, User will have the right to access Exchange to enter orders on Exchange, receive status updates on orders, cancel orders, and execute trades against orders on the Exchange limit order book (collectively, the "Services"). User acknowledges and agrees that nothing in this Agreement constitutes an understanding by Exchange to continue any aspect in its current form. Exchange may from time to time make additions, deletions or modifications to the Services. User acknowledges and agrees that Exchange may temporarily or permanently, unilaterally condition, modify or terminate the right of any individuals or entities to access, receive or use Exchange in accordance with Certificate of Incorporation, Bylaws, Rules and Procedures of Exchange, as amended from time to time (the "Exchange Rules"). In the event of a conflict between the Exchange Rules and this Agreement, the Exchange Rules shall prevail. Exchange reserves the right to modify or change the Services provided Exchange notifies User prior to the effectiveness of the modification and User's continued use of the Services following the modification will constitute User's acceptance of the modification.
- 3. Compliance.** Except as otherwise provided herein, with respect to all orders submitted to Exchange by User, it is the sole responsibility of User to ensure compliance, by itself, its customers and its representatives, with all applicable United States federal and state laws, rules, and regulations as well as those of FINRA or any other self-regulatory organization of which the User is a member to the extent applicable to User. User represents and warrants that: (i) it will use Exchange only if and when it is duly authorized to use Exchange pursuant to the Exchange Rules; (ii) it agrees to be bound by, and will only use Exchange in compliance with, Exchange Rules; (iii) it is and will remain responsible for its use of Exchange and the use of Exchange by any of its employees, customers or agents or, if User is a member of Exchange, by any person which has entered into a sponsorship arrangement with User to use Exchange (a "Sponsored Participant"); (iv) it will maintain and keep current a list of all authorized traders who may obtain access to Exchange on behalf of User and/or any Sponsored Participant(s); and (v) it will familiarize User's authorized traders with all of User's obligations under this Agreement and will assure that they receive appropriate training prior to any use of or access to Exchange.
- 4. Monitoring.** User acknowledges and agrees that Exchange will monitor the use of Exchange by User for compliance with all applicable laws and regulations, including, without limitation, Exchange Rules. User acknowledges its responsibility to monitor its employees, agents and customers for compliance with Exchange Rules, the rules and regulations of any self-regulatory organizations of which User is a member and all applicable federal and state laws.
- 5. Settlement of Transactions.** User agrees that it is User's absolute, unconditional, and unassignable obligation, in connection with each securities transaction effected by User on Exchange to ensure the timely delivery of the subject securities and/or funds as well as any required remittance of interest, dividend payments and/or other distributions in compliance with applicable laws and rules, including, without limitation, relevant rules under the Securities Exchange Act of 1934, as amended (the "Act") as well as the rules of any qualified clearing agency. User will promptly notify Exchange in writing upon becoming aware of any material change in or to User's clearing arrangements. Exchange retains the right to break any trade without liability to User or any of User's customers in accordance with the Exchange's Clearly Erroneous Executions Rule (Exchange Rule 11.15, as may be amended or re-numbered from time to time).
- 6. Sponsored Participants.** Notwithstanding Exchange's execution and delivery to User of a copy of this Agreement, if User is a Sponsored Participant, and not a member of Exchange, as a condition to initiating and continuing access to Exchange, User must enter into and maintain customer agreements with one or more sponsoring members of Exchange establishing proper relationship(s) and account(s) through which User may trade on Exchange. Such customer agreement(s) must incorporate the sponsorship provisions set forth in Exchange Rules.

7. Connectivity. User is solely responsible for providing and maintaining all necessary electronic communications with Exchange, including, wiring, computer hardware, software, communication line access, and networking devices.

8. Market Data. User hereby grants to Exchange a non-exclusive, non-assignable, non-transferable, worldwide, irrevocable license to receive and use information and data that User or User's agent enters into Exchange ("User's Data") for the following purposes: for performing self-regulatory functions; for internal commercial purposes (i.e., purposes that do not include disclosing, publishing, or distributing outside of Exchange); and for use within Exchange market data products (i.e., products that include disclosure, publication, or distribution to third parties), provided that: (i) such market data products are provided in an aggregate manner that does not directly or indirectly identify User as the source of the information; and (ii) fees for any such market data product are filed with the Securities and Exchange Commission ("SEC") in accordance with the requirements of Section 19 of the Act. Subject to the foregoing license, as between Exchange and User, User retains all ownership and other rights associated with User's Data. No provision in this Agreement shall impair any right, interest, or use of User's Data granted by operation of SEC rules or any other rule or law. User represents and warrants that, with respect to User's Data: (i) User owns or has sufficient rights in and to User's Data to authorize Exchange to use User's Data to perform all obligations under this Agreement with respect thereto; (ii) use or delivery of User's Data by User or Exchange will not violate the proprietary rights (including, without limitation, any privacy rights) of any party; and (iii) use or delivery of User's Data by User or Exchange will not violate any applicable law or regulation.

9. Restrictions on Use; Security. Unless otherwise required by law, User may not sell, lease, furnish or otherwise permit or provide access to Exchange to any other entity or to any individual that is not User's employee, customer, agent or Sponsored Participant. User accepts full responsibility for its employees', customers', agents' and Sponsored Participants' use of Exchange, which use must comply with Exchange Rules and the User's obligations under this Agreement. User will take reasonable security precautions to prevent unauthorized use of or access to Exchange, including unauthorized entry of information into Exchange, or the information and data made available therein. User understands and agrees that User is responsible for any and all orders, trades and other messages and instructions entered, transmitted or received under identifiers, passwords and security codes of User's authorized traders, and for the trading and other consequences thereof, except in the event of willful misconduct, fraud or a breach of this Agreement by Exchange that results in unauthorized access by other parties. User may not sell, lease, furnish or otherwise permit or provide access to any data feed containing quotation or trade information from Exchange ("Exchange Data") to any other person or to any other office or place unless it signs and complies with a separate Cboe Data Services Data Agreement. Each party shall install and maintain at all times during the term of this Agreement a corporate "firewall" protecting its computer network in accordance with commercially reasonable specifications and standards. Exchange shall not include in the operation of Exchange or the Services provided under this Agreement any computer code designed to disrupt, disable, harm, or otherwise impede in any manner, including aesthetic disruptions or distortions, the operation of User's computer system, or any other associated software, firmware, hardware, computer system or network (sometimes referred to as "viruses" or "worms"), or that would disable such system or impair in any way its operation based on the elapsing of a period of time, advancement to a particular date or other numeral (sometimes referred to as "time bombs", "time locks", or "drop dead" devices), or any other similar harmful, malicious or hidden programs, procedures, routines or mechanisms which would cause such programs to cease functioning, or provide or allow unauthorized access to the User's system, or to damage or corrupt data, storage media, programs, equipment or communications, or otherwise interfere with operations. In addition, Exchange shall implement a commercially reasonable method to intercept and block or delete any such viruses, worms, time bombs, time locks, drop dead devices or other malicious or harmful programs, procedures, routines or mechanisms, and carry out on a regular basis, no less frequently than monthly, and more frequently as reasonably required, a commercially reasonable method to scan its computer system and eliminate from it any such malicious or harmful programs, procedures, routines or mechanisms.

10. Information.

(a) **Confidentiality.** Both parties acknowledge that: (i) Exchange and the information and data made available therein, incorporate confidential and proprietary information developed, acquired by or licensed to Exchange; and (ii) each party may receive or have access to other proprietary or confidential information disclosed and reasonably understood as confidential by the disclosing party (collectively, the "Information"). The receiving party will use the disclosing party's Information solely to perform its obligations under this Agreement. The receiving party will take all precautions necessary to safeguard the confidentiality of the disclosing party's Information, including without limitation: (i) those taken by the receiving party to protect its own confidential information; and (ii) those which the disclosing party may reasonably request from time to time. Exchange will not disclose the identity of User or User's customers to any of its other members or to any third parties in

connection with orders, trades and other messages and instructions entered or executed by User on Exchange, except as required by a court or regulatory or self-regulatory authority with jurisdiction over Exchange or User, or to facilitate the clearance and settlement of a trade, or with written permission from User.

(b) **Disclosure.** The receiving party will not disclose, in whole or in part, the disclosing party's Information to any person, except as specifically authorized under this Agreement. User may not disclose any data or compilations of data made available to User by Exchange without the express, prior written authorization of Exchange. The receiving party may also disclose Information in accordance with its regulatory obligations.

(c) **Unauthorized Use or Disclosure.** The parties acknowledge that any unauthorized use or disclosure of the disclosing party's Information may cause irreparable damage to the disclosing party. If an unauthorized use or disclosure occurs, the receiving party will immediately notify the disclosing party and take at its expense all steps necessary to recover the disclosing party's Information and to prevent its subsequent unauthorized use or dissemination, including availing itself of actions for seizure and injunctive relief. If the receiving party fails to take these steps in a timely and adequate manner, the disclosing party may take them at the receiving party's expense, and the receiving party will provide the disclosing party with its reasonable cooperation in such actions that the disclosing party may request.

(d) **Limitation.** The receiving party will have no confidentiality obligation with respect to any portion of the disclosing party's Information that: (i) the receiving party independently developed before receiving the Information from the disclosing party; (ii) the receiving party lawfully obtained from a third party under no obligation of confidentiality; (iii) is or becomes available to the public other than as a result of an act or omission of the receiving party or any of its employees; or (iv) the receiving party is compelled to disclose by law, regulation or legal process provided by a court of competent jurisdiction or other governmental entity to whose jurisdiction the receiving party is subject.

11. Clearly Erroneous Trade Policy. User has read and agrees to the terms stipulated in Exchange Rule 11.15 (Clearly Erroneous Executions), as Exchange may amend or re-number from time to time.

12. Corporate Names; Proprietary Rights. Exchange and User each acknowledge and agree that Exchange and User each have proprietary rights in their respective trade names, trademarks, service marks, logos, copyrights and patents, registered or unregistered (collectively, the "Marks"). Exchange and User each agree that they shall not use the other party's Marks in any way that would infringe upon the rights of the other Party. Further, this Agreement shall not grant either party the right to use the other party's Marks in any marketing, promotional or other materials without the prior review and written consent of the other party.

13. Fees. By signing this Agreement, User agrees to make timely payment of all system usage fees, as may be set forth in Exchange Rules or posted on Exchange's web site, as well as any applicable late fees for the failure to make payment within the required time period. Fees are payable within 30 days of the invoice date. User will be solely responsible for any and all telecommunications costs and all other expenses incurred in linking to, and maintaining its link to, Exchange. Failure to make payments within 30 days from the invoice date may result in suspension or termination of Services. User agrees to pay Exchange a late charge in the amount of 1% per month on all past due amounts that are not the subject of a legitimate and bona fide dispute. Subject to the Act, Exchange reserves the right to change its fee schedule with 48 hours prior notice to User (delivered via e-mail and posted to the Exchange web site). The provisions of this Section will survive the termination of this Agreement.

14. DISCLAIMER OF WARRANTY. THE SERVICES ARE PROVIDED AS-IS, WITHOUT WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED CONDITIONS OR WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE, ANY IMPLIED WARRANTY ARISING FROM TRADE USAGE, COURSE OF DEALING OR COURSE OF PERFORMANCE, AND OF ANY OTHER WARRANTY OR OBLIGATION WITH RESPECT TO THE SYSTEM OR ANY SOFTWARE OR OTHER MATERIALS MADE AVAILABLE TO USER AND ALL SUCH OTHER WARRANTIES ARE HEREBY DISCLAIMED. THERE IS NO GUARANTY THAT THE SERVICES PROVIDED BY EXCHANGE WILL MEET THE USER'S REQUIREMENTS, BE ERROR FREE, OR OPERATE WITHOUT INTERRUPTION. EXCHANGE GIVES NO WARRANTIES OF ANY KIND AS TO THE FITNESS, CAPACITY, OR CONDUCT OF ANY OTHER PERSON HAVING ACCESS TO EXCHANGE AND SHALL NOT BE HELD LIABLE TO OR THROUGH USER OR OTHERWISE FOR ANY USE OR ABUSE WHATSOEVER OF EXCHANGE BY ANOTHER PERSON HAVING ACCESS TO EXCHANGE, INCLUDING, WITHOUT LIMITATION, ANY FAILURE TO CONCLUDE TRANSACTIONS OR OBSERVE APPLICABLE MARKET REGULATIONS OR CONVENTIONS OR TO PAY REQUISITE TAXES OR OTHER CHARGES ON ANY TRANSACTIONS OR TO OTHERWISE ACT LAWFULLY.

15. NO LIABILITY FOR TRADES. ABSENT FRAUD OR WILLFUL MISCONDUCT BY EXCHANGE OR A CLAIM ARISING OUT OF EXCHANGE'S INDEMNIFICATION OBLIGATION, USER UNDERSTANDS AND AGREES THAT: (i) EXCHANGE IS NOT DIRECTLY OR INDIRECTLY A PARTY TO OR A PARTICIPANT IN ANY TRADE OR TRANSACTION ENTERED INTO OR OTHERWISE CONDUCTED THROUGH EXCHANGE; AND (ii) EXCHANGE IS NOT LIABLE IN ANY MANNER TO ANY PERSON (INCLUDING WITHOUT LIMITATION USER AND ANY PERSON FOR WHOM USER IS AUTHORIZED TO TRADE OR ACT) FOR THE FAILURE OF ANY PERSON ENTERING INTO A TRADE OR TRANSACTION BY MEANS OF EXCHANGE TO PERFORM SUCH PERSON'S SETTLEMENT OR OTHER OBLIGATIONS UNDER SUCH TRADE OR TRANSACTION. ABSENT FRAUD OR WILLFUL MISCONDUCT BY EXCHANGE OR A CLAIM ARISING OUT OF EXCHANGE'S INDEMNIFICATION OBLIGATION, NEITHER EXCHANGE, NOR ANY OF ITS AGENTS, AFFILIATES OR LICENSORS WILL BE LIABLE FOR ANY LOSSES, DAMAGES, OR OTHER CLAIMS, ARISING OUT OF EXCHANGE OR ITS USE AND ANY LOSSES, DAMAGES, OR OTHER CLAIMS, RELATED TO A FAILURE OF EXCHANGE TO DELIVER, DISPLAY, TRANSMIT, EXECUTE, COMPARE, SUBMIT FOR CLEARANCE AND SETTLEMENT, OR OTHERWISE PROCESS AN ORDER, MESSAGE, OR OTHER DATA ENTERED INTO, OR CREATED BY, EXCHANGE WILL BE ABSORBED BY THE USER THAT ENTERED THE ORDER, MESSAGE OR OTHER DATA INTO EXCHANGE. NOTWITHSTANDING THE FOREGOING, EXCHANGE MAY BE LIABLE TO USER TO THE EXTENT SUCH LIABILITY ARISES BASED ON THE EXCHANGE RULE CURRENTLY NUMBERED 11.14 (LIMITATION OF LIABILITY), AS SUCH RULE MAY BE AMENDED OR RE-NUMBERED FROM TIME TO TIME.

16. NO CONSEQUENTIAL DAMAGES. ABSENT FRAUD OR WILLFUL MISCONDUCT BY EXCHANGE OR A CLAIM ARISING OUT OF EXCHANGE'S INDEMNIFICATION OBLIGATION, UNDER NO CIRCUMSTANCES WILL EXCHANGE OR ITS AGENTS, AFFILIATES OR LICENSORS BE LIABLE FOR ANY LOSS, DAMAGE, CLAIM OR EXPENSE, INCLUDING WITHOUT LIMITATION ANY DIRECT, CONSEQUENTIAL, INDIRECT, SPECIAL, PUNITIVE OR INCIDENTAL DAMAGES OR LOST PROFITS, WHETHER FORESEEABLE OR UNFORESEEABLE, BASED ON USER'S CLAIMS OR THE CLAIMS OF ITS CUSTOMERS, EMPLOYEES OR AGENTS (INCLUDING, BUT NOT LIMITED TO, CLAIMS FOR LOSS OF DATA, GOODWILL, USE OF MONEY OR USE OF EXCHANGE, INTERRUPTION IN USE OR AVAILABILITY OF EXCHANGE, STOPPAGE OF OTHER WORK OR IMPAIRMENT OF OTHER ASSETS), ARISING OUT OF BREACH OR FAILURE OF EXPRESS OR IMPLIED WARRANTY, BREACH OF CONTRACT, MISREPRESENTATION, NEGLIGENCE, STRICT LIABILITY IN TORT OR OTHERWISE. THIS SECTION WILL NOT APPLY ONLY WHEN AND TO THE EXTENT THAT APPLICABLE LAW SPECIFICALLY REQUIRES LIABILITY, DESPITE THE FOREGOING EXCLUSION AND LIMITATION. NOTWITHSTANDING THE FOREGOING, EXCHANGE MAY BE LIABLE TO USER TO THE EXTENT SUCH LIABILITY ARISES BASED ON THE EXCHANGE RULE CURRENTLY NUMBERED 11.14 (LIMITATION OF LIABILITY), AS SUCH RULE MAY BE AMENDED OR RE-NUMBERED FROM TIME TO TIME.

17. Indemnification by User. User agrees to indemnify and hold harmless Exchange, its owners, subsidiaries, affiliates, officers, directors, employees, agents, and any related persons and entities, from and against all expenses and costs and damages (including any reasonable legal fees and expenses), direct, consequential, and/or incidental in nature, claims, demands, proceedings, suits, and actions, and all liabilities resulting from, in connection with, or arising out of any failure by User, for any reason, fraudulent, negligent or otherwise, to comply with its obligations under this agreement and for any loss or claim which may arise from a claim that one or more trades or orders in securities placed by User with Exchange were in violation of any state or federal securities law or Exchange Rules unless such expenses, costs, damages, claims, demands, proceedings, suits, actions, or liabilities arise from Exchange's willful misconduct, fraud or breach of Exchange's obligations under this Agreement.

18. Indemnification by Exchange. Exchange agrees to indemnify, defend and hold harmless User and its subsidiaries, affiliates and its and their respective officers, directors, employees, and agents from and against all expenses and costs and damages (including any legal fees and expenses), direct, consequential, and/or incidental in nature, claims, demands, proceedings, suits, and actions, and all liabilities resulting from, in connection with, or arising out of any third party claim that Exchange or the Services, or User's use thereof, infringes any copyright, patent, trademark, trade secret or other intellectual property right.

19. Termination. User or Exchange may terminate this Agreement or any part of the Services upon 30 days written notice to the other party. In addition, Exchange may suspend or terminate the Services to User immediately if it determines, in Exchange's sole reasonable determination, that: (i) User has breached any material term of this Agreement; (ii) User is engaged in activities that Exchange determines to be detrimental to Exchange or its members; (iii) User poses a credit risk to Exchange; (iv) User is selling, leasing, furnishing or otherwise permitting or providing access to Exchange Data without the prior approval of Exchange; (v) User has violated any Exchange Rules; or (vi) User ceases to be a member in good standing with Exchange. Upon the termination of this Agreement for any reason, all rights granted to User hereunder will cease.

The following Sections will survive the termination or expiration of this Agreement for any reason: 8, 9, 10, 12, 13, 14, 15, 16, 17, 18, 19, 24 and 26. In no event will termination of this Agreement relieve User of any obligations incurred prior to the termination or through its use of or connection to Exchange.

20. Acknowledgement of SRO Obligations. Exchange represents: (i) that Exchange is registered with the SEC as a national securities exchange pursuant to Section 6 of the Act; (ii) that Exchange has a statutory obligation to protect investors and the public interest, and to ensure that quotation information supplied to investors and the public is fair and informative, and not discriminatory, fictitious or misleading; (iii) that Section 19(g)(1) of the Act mandates that Exchange, as a self-regulatory organization, comply with the Act; and (iv) that Exchange has jurisdiction over its members to enforce compliance with the Act as well as the rules, regulations and interpretations of Exchange. Accordingly, User agrees that Exchange, when required to do so in fulfillment of its statutory obligations, may, in accordance with Exchange Rules, temporarily or permanently, unilaterally condition, modify or terminate the right of any or all individuals or entities, including User, to receive or use the Services. Exchange shall undertake reasonable efforts to notify User of any such condition, modification or termination, and User shall promptly comply with any requirement that may be contained in such notice within such period of time as may be determined in good faith by Exchange to be necessary and consistent with its statutory obligations. Any individual or entity that receives such a notice shall have available to it such procedural protections as are provided to it by the Act and the applicable rules thereunder and Exchange Rules.

21. Assignment. User's license to use the Services during the term of this Agreement is personal, nonexclusive and nontransferable. User shall not assign, delegate or otherwise transfer this Agreement or any of its rights or obligations hereunder without Exchange's prior approval, which will not be unreasonably withheld. Exchange may, as permitted by the Act, assign or transfer this Agreement or any of its rights or obligations hereunder to a related or unrelated party upon notice to User.

22. Force Majeure. Neither party to this Agreement will be liable for delay or failure to perform its obligations hereunder (other than a failure to pay amounts when due) caused by an event that is beyond the party's control; provided, however, that such party will not have contributed in any way to such event.

23. Severability. Each provision of this Agreement will be deemed to be effective and valid under applicable law, but if any provision of this Agreement is determined to be invalid, void, or unenforceable under any law, rule, administrative order or judicial decision, that determination will not affect the validity of the remaining provisions of this Agreement.

24. Arbitration. In connection with the following agreement to arbitrate, each party understands that: (i) arbitration is final and binding on the parties; (ii) the parties are waiving their right to seek remedies in court, including the right to jury trial; (iii) pre-arbitration discovery is generally more limited than and different from court proceedings; (iv) the arbitrators' award is not required to include factual findings or legal reasoning, and any party's right to appeal or seek modification of rulings by the arbitrators is strictly limited; and (v) the panel of arbitrators will typically include a minority of arbitrators who were or are affiliated with the securities industry. Subject to the preceding disclosures, each party agrees that any controversy arising out of or relating to this Agreement or the breach thereof will be resolved and settled by arbitration in accordance with the Commercial Arbitration Rules of the American Arbitration Association or in accordance with such other rules and procedures as are agreed to by the parties. The arbitration proceeding shall be conducted in New York, New York, unless otherwise agreed to by the parties. Judgment upon arbitration may be entered in any court, state or federal, having jurisdiction; provided, however, that nothing herein will prevent either party from: (i) petitioning a regulatory body regarding a matter in question over which the regulatory body has administrative jurisdiction; or (ii) pursuing injunctions before any administrative or judicial forum provided that all monetary and other relief is submitted for arbitration.

25. Amendment. Exchange may amend any term or condition of this Agreement on one hundred and twenty (120) days' written notice to User (which notice may be provided by way of a circular issued to Members generally). User may object in writing to the proposed amendment by providing a written response to the address specified above, such response stating in reasonable detail the basis of the objection. Such response must be received no later than sixty (60) days after the date that Exchange distributed the initial notice. Exchange will respond to User's timely objection in writing within thirty (30) days of receipt and will use reasonable efforts thereafter to meet with the objecting User (in person or by phone) to discuss in good faith any potential resolution. Otherwise, any use by User of the System after the expiration of the one hundred and twenty (120) day notice period shall be deemed acceptance by User of the amendment. User may not alter any terms and conditions of this Agreement, and no modification to this Agreement proposed by User will be binding, unless in writing and manually

signed by an authorized representative of each party.

26. Miscellaneous. All notices or approvals required or permitted under this Agreement must be given in writing to Exchange at the address specified above or to User at its last reported principal office address. Any waiver or modification of this Agreement will not be effective unless executed in writing and signed by the other party. This Agreement will bind each party's successors-in-interest. This Agreement will be governed by and interpreted in accordance with the internal laws of the State of New York, USA. For all matters not subject to Section 24 (Arbitration) above, both parties submit to the jurisdiction of the state and federal courts in and for the State of New York, USA for the resolution of any dispute arising under this Agreement. If any provision of this Agreement is held to be unenforceable, in whole or in part, such holding will not affect the validity of the other provisions of this Agreement. This Agreement, together with the applicable Exchange Rules, constitutes the complete and entire statement of all conditions and representations of the agreement between Exchange and User with respect to its subject matter and supersedes all prior writings or understandings.

IN WITNESS WHEREOF the parties hereto have caused this Agreement to be executed by their duly authorized officers.

User: _____

Cboe EDGA Exchange, Inc.

Signature: _____

Signature: _____

Printed Name: _____

Printed Name: _____

Title: _____

Title: _____

Date: _____

Cboe Trading, Inc.

Securities Routing Agreement

Provided that User is a Member or Sponsored Participant of a Member of either Cboe EDGX Exchange, Inc., Cboe EDGA Exchange, Inc. or both of Cboe EDGX Exchange, Inc. and Cboe EDGA Exchange, Inc. (as applicable, the "Exchange") and subject to a valid, ongoing User Agreement with Exchange, Cboe Trading, Inc. (hereinafter "Cboe Trading"), a broker-dealer registered in accordance with Section 15(a) of the Securities Exchange Act of 1934, as amended (the "Act"), agrees to act as agent to User for the purpose of providing certain routing services, as described herein, provided that User is bound by the terms and conditions of this agreement (the "Routing Agreement") and any applicable rules and interpretations of Exchange Rules. Whereas Cboe Trading provides certain order routing services for Exchange, and User desires to use the order routing facilities of Exchange, for good and valuable consideration, User and Cboe Trading agree as follows:

- 1. Routing Services.** Cboe Trading, a wholly owned subsidiary of Cboe Bats, LLC (f/k/a CBOE V, LLC), agrees to act as agent for User for routing orders entered into Exchange to the applicable market centers or broker-dealers for execution, whenever such routing is at User's request, and is permitted in accordance with Exchange Rules. User understands and agrees that orders executed on its behalf shall at all times be subject to the terms and conditions of Exchange Rules. In the event of a conflict between the Exchange Rules and this Routing Agreement, the Exchange Rules shall prevail.
- 2. Orders Not Eligible for Routing Services.** User agrees that Cboe Trading will not handle or otherwise route any orders that are not eligible for order routing in accordance with Exchange Rules.
- 3. Cancellation; Modification of Orders.** User agrees that any requests regarding cancellation or modification of orders shall be subject to Exchange Rules. User understands that the Exchange Rules may provide that requests to cancel orders while the order is routed away to another market center and remains outside Exchange will be processed by Cboe Trading subject to the applicable trading rules of the relevant market center.
- 4. Transmission of Order Instructions.** User agrees that all orders on its behalf must be transmitted to Cboe Trading through Exchange. User agrees that Exchange is its exclusive mechanism for purposes of transmitting orders on its behalf to Cboe Trading and for receiving notice regarding such orders. Cboe Trading shall be entitled to rely upon and act in accordance with any order instructions received from Exchange on behalf of User. User agrees that all order executions effected on behalf of User pursuant to this Routing Agreement shall be reported by Cboe Trading to Exchange. User shall be notified of such executions through Exchange.
- 5. Clearance and Settlement.** User agrees that all transactions executed on its behalf shall be processed in accordance with Exchange Rules. If User is a Member, User agrees that orders executed on its behalf by Cboe Trading shall be automatically processed by Exchange for clearance and settlement on a locked-in basis. If User is a Sponsored Participant, User agrees that all orders executed on its behalf by Cboe Trading shall be cleared and settled, using the relevant sponsoring Exchange Member's mnemonic (or its clearing firm's mnemonic, as applicable) and such Exchange Member retains responsibility for the clearance and settlement of all such orders.
- 6. Information.**
 - (a) **Confidentiality.** Both parties acknowledge that each party to this Routing Agreement may receive or have access to other proprietary or confidential information disclosed and reasonably understood as confidential by the disclosing party (collectively, the "Information"). The receiving party will use the disclosing party's Information solely to perform its obligations under this Routing Agreement. The receiving party will take all precautions necessary to safeguard the confidentiality of the disclosing party's Information, including without limitation: (i) those taken by the receiving party to protect its own confidential information; and (ii) those which the disclosing party may reasonably request from time to time. Cboe Trading will not disclose the identity of User or User's customers to any of Exchange's other Members or to any third parties in connection with orders, trades and other messages and instructions entered or executed by User on Exchange, except as required by a court or regulatory or self-regulatory authority with jurisdiction over Cboe Trading, Exchange or User, or to facilitate the clearance and settlement of a trade, or with written permission from User.

(b) **Disclosure.** The receiving party will not disclose, in whole or in part, the disclosing party's Information to any person, except as specifically authorized under this Routing Agreement. If applicable, User may not disclose any data or compilations of data made available to User by Cboe Trading without the express, prior written authorization of Cboe Trading. The receiving party may also disclose Information in accordance with its regulatory obligations.

(c) **Unauthorized Use or Disclosure.** The parties acknowledge that any unauthorized use or disclosure of the disclosing party's Information may cause irreparable damage to the disclosing party. If an unauthorized use or disclosure occurs, the receiving party will immediately notify the disclosing party and take at its expense all steps necessary to recover the disclosing party's Information and to prevent its subsequent unauthorized use or dissemination, including availing itself of actions for seizure and injunctive relief. If the receiving party fails to take these steps in a timely and adequate manner, the disclosing party may take them at the receiving party's expense, and the receiving party will provide the disclosing party with its reasonable cooperation in such actions that the disclosing party may request.

(d) **Limitation.** The receiving party will have no confidentiality obligation with respect to any portion of the disclosing party's Information that: (i) the receiving party independently developed before receiving the Information from the disclosing party; (ii) the receiving party lawfully obtained from a third party under no obligation of confidentiality; (iii) is or becomes available to the public other than as a result of an act or omission of the receiving party or any of its employees; or (iv) the receiving party is compelled to disclose by law, regulation or legal process provided by a court of competent jurisdiction or other governmental entity to whose jurisdiction the receiving party is subject.

7. Term of Agreement. This Routing Agreement will be effective as of the date executed by Cboe Trading on the signature page hereof and will remain in effect thereafter until terminated by either party upon notice to the other party. Termination will be effective at the close of trading in the affected markets and applications on the day that notice of termination is received by the other party hereto. Cboe Trading may terminate this Routing Agreement with written notice if: (i) User is in breach of this Routing Agreement for any reason; (ii) any representations made by User in connection with this Routing Agreement or the User Agreement are or become false or misleading; or (iii) User is no longer a Member or Sponsored Participant of Exchange or otherwise authorized to access Exchange. Upon the termination of this Routing Agreement or the User Agreement for any reason, all rights granted to User hereunder will cease. The following Sections will survive the termination or expiration of this Routing Agreement for any reason: 6, 8, 9, 10, 11, 12, 15 and 17. In no event will termination of this Routing Agreement relieve User of any obligations incurred prior to the termination or through its use of or connection to Exchange.

8. Indemnity. User agrees to indemnify, defend and hold Cboe Trading harmless from and against any and all claims, demands, losses, costs, expenses, obligations, liabilities, damages, recoveries, and deficiencies, including interest, penalties, and attorneys' fees, arising from or as a result of User's breach of its obligations under this Routing Agreement or otherwise from its use of Cboe Trading routing services, unless such claims, demands, losses, costs, expenses, obligations, liabilities, damages, recoveries, and deficiencies arise from Cboe Trading's willful misconduct, fraud or breach of Cboe Trading's obligations under this Routing Agreement.

9. Indemnification by Cboe Trading. Cboe Trading agrees to indemnify, defend and hold harmless User and its subsidiaries, affiliates and its and their respective officers, directors, employees, and agents from and against all expenses and costs and damages (including any legal fees and expenses), direct, consequential, and/or incidental in nature, claims, demands, proceedings, suits, and actions, and all liabilities resulting from, in connection with, or arising out of any third party claim that the order routing services of Cboe Trading, or User's use thereof, infringes any copyright, patent, trademark, trade secret or other intellectual property right.

10. DISCLAIMER OF WARRANTY. ROUTING SERVICES ARE PROVIDED "AS-IS" AND WITHOUT WARRANTY OF ANY KIND. ALL WARRANTIES, CONDITIONS, REPRESENTATIONS, INDEMNITIES AND GUARANTEES WITH RESPECT TO THE ROUTING SERVICE, WHETHER EXPRESS, IMPLIED, OR STATUTORY, ARISING BY LAW, CUSTOM, PRIOR ORAL OR WRITTEN STATEMENTS BY CBOE TRADING, EXCHANGE OR ITS OR THEIR AGENTS, AFFILIATES, LICENSORS OR OTHERWISE (INCLUDING, BUT NOT LIMITED TO ANY WARRANTY OF SATISFACTORY QUALITY, ACCURACY, UNINTERRUPTED USE, TIMELINESS, TRUTHFULNESS, SEQUENCE, COMPLETENESS, MERCHANTABILITY, FITNESS FOR PARTICULAR PURPOSE OR NON-INFRINGEMENT AND ANY IMPLIED WARRANTIES ARISING FROM TRADE USAGE, COURSE OF DEALING OR COURSE OF PERFORMANCE) ARE HEREBY OVERRIDDEN, EXCLUDED AND DISCLAIMED.

11. NO LIABILITY FOR TRADES. ABSENT FRAUD OR WILLFUL MISCONDUCT BY CBOE TRADING OR A CLAIM ARISING OUT OF CBOE TRADING'S INDEMNIFICATION OBLIGATION, USER UNDERSTANDS AND AGREES THAT CBOE TRADING IS NOT LIABLE UNDER THIS ROUTING AGREEMENT TO ANY PERSON (INCLUDING WITHOUT LIMITATION USER AND ANY PERSON FOR WHOM USER IS AUTHORIZED TO TRADE OR ACT) FOR THE FAILURE OF ANY PERSON ENTERING INTO A TRADE OR TRANSACTION BY MEANS OF EXCHANGE TO PERFORM SUCH PERSON'S SETTLEMENT OR OTHER OBLIGATIONS UNDER SUCH TRADE OR TRANSACTION. ABSENT FRAUD OR WILLFUL MISCONDUCT BY CBOE TRADING OR A CLAIM ARISING OUT OF CBOE TRADING'S INDEMNIFICATION OBLIGATION, NEITHER CBOE TRADING, OR ITS AGENTS, AFFILIATES OR LICENSORS WILL BE LIABLE FOR ANY LOSSES, DAMAGES, OR OTHER CLAIMS, ARISING OUT OF THE ROUTING SERVICE OR ITS USE. ANY LOSSES, DAMAGES, OR OTHER CLAIMS, RELATED TO A FAILURE OF CBOE TRADING TO DELIVER, DISPLAY, TRANSMIT, EXECUTE, COMPARE, SUBMIT FOR CLEARANCE AND SETTLEMENT, OR OTHERWISE PROCESS AN ORDER, MESSAGE, OR OTHER DATA ENTERED INTO, OR CREATED BY, EXCHANGE WILL BE ABSORBED BY USER OR THE MEMBER SPONSORING USER, THAT ENTERED THE ORDER, MESSAGE OR OTHER DATA INTO EXCHANGE. NOTWITHSTANDING THE FOREGOING, CBOE TRADING AS A FACILITY OF THE EXCHANGE MAY BE LIABLE TO USER TO THE EXTENT SUCH LIABILITY ARISES BASED ON THE EXCHANGE RULE CURRENTLY NUMBERED 11.14 (LIMITATION OF LIABILITY), AS SUCH RULE MAY BE AMENDED OR RE-NUMBERED FROM TIME TO TIME.

12. NO CONSEQUENTIAL DAMAGES. ABSENT FRAUD OR WILLFUL MISCONDUCT BY CBOE TRADING OR A CLAIM ARISING OUT OF CBOE TRADING'S INDEMNIFICATION OBLIGATION, UNDER NO CIRCUMSTANCES WILL CBOE TRADING OR ITS AGENTS, AFFILIATES OR LICENSORS BE LIABLE FOR ANY LOSS, DAMAGE, CLAIM OR EXPENSE, INCLUDING WITHOUT LIMITATION ANY DIRECT, CONSEQUENTIAL, INDIRECT, SPECIAL, PUNITIVE OR INCIDENTAL DAMAGES OR LOST PROFITS, WHETHER FORESEEABLE OR UNFORESEEABLE, BASED ON USER'S CLAIMS OR THE CLAIMS OF ITS CUSTOMERS, EMPLOYEES OR AGENTS (INCLUDING, BUT NOT LIMITED TO, CLAIMS FOR LOSS OF DATA, GOODWILL, USE OF MONEY OR USE OF ROUTING SERVICES, INTERRUPTION IN USE OR AVAILABILITY OF CBOE TRADING, STOPPAGE OF OTHER WORK OR IMPAIRMENT OF OTHER ASSETS), ARISING OUT OF BREACH OR FAILURE OF EXPRESS OR IMPLIED WARRANTY, BREACH OF CONTRACT, MISREPRESENTATION, NEGLIGENCE, STRICT LIABILITY IN TORT OR OTHERWISE. THIS SECTION WILL NOT APPLY ONLY WHEN AND TO THE EXTENT THAT APPLICABLE LAW SPECIFICALLY REQUIRES LIABILITY, DESPITE THE FOREGOING EXCLUSION AND LIMITATION. NOTWITHSTANDING THE FOREGOING, CBOE TRADING AS A FACILITY OF THE EXCHANGE MAY BE LIABLE TO USER TO THE EXTENT SUCH LIABILITY ARISES BASED ON THE EXCHANGE RULE CURRENTLY NUMBERED 11.14 (LIMITATION OF LIABILITY), AS SUCH RULE MAY BE AMENDED OR RE-NUMBERED FROM TIME TO TIME.

13. Assignment. User shall not assign, delegate or otherwise transfer this Routing Agreement or any of its rights or obligations hereunder without Cboe Trading's prior approval, which will not be unreasonably withheld. Cboe Trading may, as permitted by the Act, assign or transfer this Routing Agreement or any of its rights or obligations hereunder to a related or unrelated party upon notice to User.

14. Force Majeure. Notwithstanding any other term or condition of this Routing Agreement to the contrary, neither Cboe Trading nor User will be obligated to perform or observe their obligations undertaken in this Routing Agreement if prevented or hindered from doing so by any circumstances found to be beyond their control.

15. Arbitration. In connection with the following agreement to arbitrate, each party understands that: (i) arbitration is final and binding on the parties; (ii) the parties are waiving their right to seek remedies in court, including the right to jury trial; (iii) pre-arbitration discovery is generally more limited than and different from court proceedings; (iv) the arbitrators' award is not required to include factual findings or legal reasoning, and any party's right to appeal or seek modification of rulings by the arbitrators is strictly limited; and (v) the panel of arbitrators will typically include a minority of arbitrators who were or are affiliated with the securities industry. Subject to the preceding disclosures, each party agrees that any controversy arising out of or relating to this Routing Agreement or the breach thereof will be resolved and settled by arbitration under the auspices of FINRA Dispute Resolution or in accordance with such other rules and procedures as are agreed to by the parties. The arbitration proceeding shall be conducted in New York, New York, unless otherwise agreed to by the parties. Judgment upon arbitration may be entered in any court, state or federal, having jurisdiction; provided, however, that nothing herein will prevent either party from: (i) petitioning a regulatory body regarding a matter in question over which the regulatory body has administrative jurisdiction; or (ii) pursuing injunctions before any administrative or judicial forum provided that all monetary and other relief is submitted for arbitration.

16. Amendment. Cboe Trading, or Exchange on its behalf, may amend any term or condition of this Routing Agreement on one hundred and twenty (120) days' written notice to User (which notice may be provided by way of a circular issued to Members of the Exchange generally). User may object in writing to the proposed amendment by providing a written response

to the address specified above, such response stating in reasonable detail the basis of the objection. Such response shall be received no later than sixty (60) days after the date that Exchange distributed the initial notice. Cboe Trading, or Exchange on its behalf, will respond to User's timely objection in writing within thirty (30) days of receipt and will use reasonable efforts thereafter to meet with the objecting User (in person or by phone) to discuss in good faith any potential resolution. Otherwise, any use by User of the routing services provided by Cboe Trading after the expiration of the one hundred and twenty (120) day notice period shall be deemed acceptance by User of the amendment. User may not alter any terms and conditions of this Routing Agreement, and no modification to this Routing Agreement proposed by User will be binding, unless in writing and manually signed by an authorized representative of each party.

17. Miscellaneous. All notices or approvals required or permitted under this Routing Agreement must be given in writing to Cboe Trading at 8050 Marshall Drive, Suite 120, Lenexa, Kansas 66214, or to User at its last reported principal office address. Any waiver or modification of this Routing Agreement will not be effective unless executed in writing and signed by the other party. This Routing Agreement will bind each party's successors-in-interest. This Routing Agreement will be governed by and interpreted in accordance with the internal laws of the State of New York, USA. For all matters not subject to Section 15 (Arbitration) above, both parties submit to the jurisdiction of the state and federal courts in and for the State of New York, USA for the resolution of any dispute arising under this Routing Agreement. If any provision of this Routing Agreement is held to be unenforceable, in whole or in part, such holding will not affect the validity of the other provisions of this Routing Agreement. This Routing Agreement, together with the applicable Exchange Rules, constitutes the complete and entire statement of all conditions and representations of the agreement between Cboe Trading and User with respect to its subject matter and supersedes all prior writings or understandings.

IN WITNESS WHEREOF the parties hereto have caused this Routing Agreement to be executed by their duly authorized officers.

User:_____

Cboe Trading, Inc.

Signature:_____

Signature:_____

Printed Name:_____

Printed Name:_____

Title:_____

Title:_____

Date:_____

Market Maker Registration Application

Members applying to become Market Makers registered with Cboe BZX Exchange, Inc. ("BZX"), Cboe BYX Exchange, Inc. ("BYX"), Cboe EDGA Exchange, Inc. ("EDGA") and Cboe EDGX Exchange, Inc. ("EDGX") (each, an "Exchange") are required to complete this Market Maker Registration Application. The Exchange may require additional information from any Applicant prior to determining whether to register such Applicant as a Market Maker.

To apply, please complete this Market Maker Registration Application and submit with all required supplementary materials via email to MembershipServices@bats.com.

Applicants are required to update any information submitted in the application when and if it becomes inaccurate or incomplete after submission.

GENERAL INFORMATION		
Date:	CRD #:	
Name of Applicant:		
Address of Principal Office:		
City:	State:	Zip:
OTHER BUSINESS ACTIVITIES		
<input type="checkbox"/> Investment Banking	<input type="checkbox"/> Public Securities Business	<input type="checkbox"/> Proprietary Trading
<input type="checkbox"/> Market Maker	<input type="checkbox"/> Dealer/Specialist	<input type="checkbox"/> Other: _____
If the Applicant is a Market Maker or Dealer/Specialist, please provide a list of the registered national securities exchange(s) or association(s) on which the Applicant has been approved as such:		
SECURITIES		
Estimate the number of securities in which the Applicant intends to become registered as a Market Maker: _____		
NET CAPITAL		
Excess Net Capital Amount: _____ As of Date: _____		
<input type="checkbox"/> Most recent FOCUS Report enclosed - required		

MARKET MAKER AUTHORIZED TRADERS

To be eligible for registration as a Market Maker Authorized Trader ("MMAT"), as defined in Exchange Rule 1.5(m), a person must successfully complete proficiency examinations and continuing education requirements applicable to Authorized Traders, as set forth in Interpretation and Policies .01 and .02 to Exchange Rule 2.5¹. Market Makers must maintain a current list of MMATs who are permitted to enter orders on behalf of the Market Maker pursuant to BZX and BYX Rule 11.8(a)(4), EDGA and EDGX Rule 11.20(a)(4).

Name: _____ CRD #: _____

☐ Series 7 Qualification ☐ Series 57 Qualification

Seeking registration on: ☐ BZX ☐ BYX ☐ EDGA ☐ EDGX

Will this individual require a web log-in to facilitate symbol registration? ☐ Yes ☐ No

If yes, please provide the information below:

Email address: _____ Phone Number: _____

Name: _____ CRD #: _____

☐ Series 7 Qualification ☐ Series 57 Qualification

Seeking registration on: ☐ BZX ☐ BYX ☐ EDGA ☐ EDGX

Will this individual require a web log-in to facilitate symbol registration? ☐ Yes ☐ No

If yes, please provide the information below:

Email address: _____ Phone Number: _____

Name: _____ CRD #: _____

☐ Series 7 Qualification ☐ Series 57 Qualification

Seeking registration on: ☐ BZX ☐ BYX ☐ EDGA ☐ EDGX

Will this individual require a web log-in to facilitate symbol registration? ☐ Yes ☐ No

If yes, please provide the information below:

Email address: _____ Phone Number: _____

Name: _____ CRD #: _____

☐ Series 7 Qualification ☐ Series 57 Qualification

Seeking registration on: ☐ BZX ☐ BYX ☐ EDGA ☐ EDGX

Will this individual require a web log-in to facilitate symbol registration? ☐ Yes ☐ No

If yes, please provide the information below:

Email address: _____ Phone Number: _____

¹ In exceptional cases and where good cause is shown, the Exchange may waive such requirement. Contact Membership Services at 913.815.7002 for more information regarding requesting a waiver of the proficiency exam requirement.

MARKET MAKER RESTRICTIONS

Restrictions apply to a Market Maker registered in a UTP Derivative Security that derives its value from any of the following: one or more currencies, commodities, derivatives based on one or more currencies or commodities, or a basket or index comprised of currencies or commodities (collectively, "Reference Assets"). BZX Rule 14.11(j)(5) and BYX, EDGA and EDGX Rule 14.1(c)(5) require a Market Maker registered in a UTP Derivative Security to file with the respective Exchange(s) and keep a current list identifying all accounts for trading Reference Assets or any derivative instruments based on a Reference Asset of that UTP Derivative Security, which the Applicant: (1) holds an interest; (2) has investment discretion; or (3) shares in the profits and/or losses.

If the applicant intends to become a registered Market Maker in a UTP Derivative Security, please submit a current list of accounts in which the underlying physical asset or commodity, related futures or options on futures, or any other related derivatives are traded to the Regulatory Department at Surveillance@bats.com.

WEBSITE DISCLOSURE AND DATA PROVIDED TO ISSUERS

Notwithstanding any provision to the contrary set forth in User Agreement by and between the Exchange and applicant (the "User Agreement") related to information or data that applicant or applicant's agent enters into Exchange ("Transaction Data"), applicant hereby grants to the Exchange a non-exclusive, non-assignable, non-transferable, worldwide, irrevocable license to receive and use Transaction Data solely within Exchange market data products that it offers exclusively to issuers relating to the market in the issuer's own securities even if such market data products present Transaction Data in a manner that provides applicant's volume ranking on the Exchange in such issuer's own securities. Further, applicant hereby agrees that Exchange can publicly identify applicant as a Market Maker on the Exchange. Finally, applicant agrees that Exchange can provide confidential information derived from Transaction Data solely to issuers relating to the market in an issuer's own securities and that such information may include applicant's identity.

The undersigned attests that the information provided in this application on behalf of the Applicant is complete and accurate. Furthermore, the undersigned acknowledges that the Applicant agrees to update the application as necessary, and to abide by all rules of the Exchange, and interpretations thereof, as they currently exist and as they may be added, supplemented and/or amended from time to time.

Signature of Authorized Officer, Partner, Managing Member or
Sole Proprietor

Printed Name

Title

Date

User Agreement Addendum for Registered Market Makers

This User Agreement Addendum for registered Market Makers (this "Addendum"), with an effective date as of the date executed on the signature page hereof, is made by and among each of Cboe BZX Exchange, Inc., Cboe BYX Exchange, Inc., Cboe EDGA Exchange, Inc. and Cboe EDGX Exchange, Inc. (collectively, the "Exchange") and the user referenced below ("User"). Capitalized terms used but not defined in this Addendum shall have the meaning set forth in the User Agreement by and between the Exchange and User (the "User Agreement").

An executed version of this Addendum can be delivered to the Exchange via email to MembershipServices@bats.com.

WEBSITE DISCLOSURE AND DATA PROVIDED TO ISSUERS

Notwithstanding any provision to the contrary set forth in User Agreement by and between the Exchange and User (the "User Agreement") related to information or data that User or User's agent enters into Exchange ("Transaction Data"), User hereby grants to the Exchange a non-exclusive, non-assignable, non-transferable, worldwide, irrevocable license to receive and use Transaction Data solely within Exchange market data products that it offers exclusively to issuers relating to the market in the issuer's own securities even if such market data products present Transaction Data in a manner that provides User's volume ranking on the Exchange in such issuer's own securities. Further, User hereby agrees that Exchange can publicly identify User as a registered market maker on the Exchange. Finally, User agrees that Exchange can provide confidential information derived from Transaction Data solely to issuers relating to the market in an issuer's own securities and that such information may include User's identity.

User: _____

Signature: _____

Printed Name: _____

Title: _____

Cboe BZX Exchange, Inc.; Cboe BYX Exchange, Inc.;
Cboe EDGA Exchange, Inc.; Cboe EDGX Exchange, Inc.

Signature: _____

Printed Name: _____

Title: _____

Date: _____

User Agreement Addendum to Permit Attribution

This User Agreement Addendum to Permit Attribution (this "Addendum"), with an effective date as of the date executed on the signature page hereof, is made by and among each of Cboe BZX Exchange, Inc., Cboe BYX Exchange, Inc., Cboe EDGA Exchange, Inc. and Cboe EDGX Exchange, Inc. (collectively, the "Exchange") and the user referenced below ("User"). Capitalized terms used but not defined in this Addendum shall have the meaning set forth in the User Agreement by and between the Exchange and User (the "User Agreement").

User's execution of this Addendum is optional. By signing this form, User authorizes attribution of Covered Data (as defined below) in Exchange data products and/or on the Exchange's public website.

An executed version of this Addendum can be delivered to the Exchange via email to MembershipServices@bats.com.

TERMS OF ADDENDUM

Whereas, the Exchange provides certain services to User pursuant to the User Agreement and User desires to continue to use such services as modified below. For good and valuable consideration, User and the Exchange, agree as follows:

1. Scope. This Addendum shall be deemed to be a supplement to the User Agreement and all terms and provisions of the User Agreement which are not expressly overridden by the terms and conditions of this Addendum shall be incorporated herein by reference. This Addendum shall only apply to the Trading Platform(s), Attribution Type(s) and Attributed MPIDs selected by User below (collectively, the "Covered Data").

Trading Platform: User limits the applicability of this Addendum to the following Exchange trading platform(s):

- ☐ Cboe BZX Exchange, Inc. (Equities)
- ☐ Cboe BZX Exchange, Inc. (Options)
- ☐ Cboe BYX Exchange, Inc.
- ☐ Cboe EDGA Exchange, Inc.
- ☐ Cboe EDGX Exchange, Inc. (Equities)

Attribution Type: User limits the applicability of this Addendum to the following types of attribution:

- ☐ Allow Use of User's Identity in connection with its Aggregate Volume Ranking Relative to other Users
- ☐ Allow Quote Attribution

Attributed MPIDs: User limits the applicability of this Addendum to the following MPIDs:

- ☐ Aggregate all User MPIDs ☐ Limit Attribution to Selected MPIDs: _____

2. Modification of User Agreement. The parties acknowledge that the User Agreement, including but not limited to Sections 8 and 10, requires the Exchange to keep User's identity confidential and would preclude the Exchange from publishing any information regarding information and data that User or User's agent enters into the Exchange. Notwithstanding such provisions, User hereby grants to the Exchange a non-exclusive, non-assignable, non-transferable, worldwide, revocable license to receive and use Covered Data (as defined by User's selection(s) above) within Exchange market data products and/or on the Exchange's public website even if such use of Covered Data is inconsistent with the terms of the User Agreement. The license granted hereunder shall remain in effect for the term of the User Agreement, unless this Addendum is terminated earlier by User or Exchange upon 30 days written notice to the other party.

IN WITNESS WHEREOF the parties hereto have caused this Addendum to be executed by their duly authorized officers.

User: _____

Signature: _____

Printed Name: _____

Title: _____

Cboe BZX Exchange, Inc.; Cboe BYX Exchange, Inc.;
Cboe EDGA Exchange, Inc.; Cboe EDGX Exchange, Inc.

Signature: _____

Printed Name: _____

Title: _____

Date: _____

Volume Aggregation and Volume Details Request

This request for volume aggregation and detailed execution information is made to Cboe BZX Exchange, Inc., Cboe BYX Exchange, Inc., Cboe EDGA Exchange, Inc., and Cboe EDGX Exchange, Inc. (collectively, the "Exchange") by the Members noted below. This request should be completed by Members who are affiliated as evidenced on each Member's Form BD or who have been appointed as an Appointed Order Entry Firm / Appointed Market Maker pursuant to the Exchange's fee schedule. "Affiliate" shall mean any entity that, from time to time, directly or indirectly, Controls, is Controlled by, or is under common Control with such party. "Control" means the power to direct or cause the direction of the management of policies of another entity, whether through the ownership of voting securities, by contract, or otherwise.

The Members noted below would like to request aggregation of all equities and options volume submitted to the Exchange by each Member with an approved trading ID. Additionally, the Members request detailed information regarding aggregated volume on the Exchange. By signing below, each Member acknowledges and agrees that the other Member will have access to the same detailed information regarding aggregated volume on the Exchange and releases each Exchange from any liability associated with providing such information.

An executed version of this Request can be delivered to the Exchange via email to MembershipServices@bats.com.

Member Name:	CRD #:
_____ Signature of Authorized Officer, Partner, Managing Member or Sole Proprietor	_____ Date
_____ Printed Name	_____ Title

Member Name:	CRD #:
_____ Signature of Authorized Officer, Partner, Managing Member or Sole Proprietor	_____ Date
_____ Printed Name	_____ Title

Member Name:	CRD #:
_____ Signature of Authorized Officer, Partner, Managing Member or Sole Proprietor	_____ Date
_____ Printed Name	_____ Title

Direct Debit Opt-In Form

The Depository Trust & Clearing Corporation offers a Direct Debit program that allows Exchanges to bill their Members directly through the Clearing Firm's account. Cboe BZX Exchange, Inc., Cboe BYX Exchange, Inc., Cboe EDGA Exchange, Inc. and Cboe EDGX Exchange, Inc. (each, an "Exchange") use this process to bill Section 31 Fees (mandatory direct debit) and Transaction Fees (optional direct debit).

To Opt-In for Direct Debit of Transaction Fees, this Form must be completed for each Member/Clearing Firm relationship. An executed version of this Form can be delivered to the Exchange via email to MembershipServices@bats.com.

All Transaction Fee invoices that result in a credit due to the Member will be cleared during the Exchange's regular rebate processing. These payments can be in the form of a check or ACH, according to the Member's preference.

Trading Platform(s), check all that apply:

- ☐ Cboe BZX Exchange, Inc.
- ☐ Cboe BYX Exchange, Inc.
- ☐ Cboe EDGA Exchange, Inc.
- ☐ Cboe EDGX Exchange, Inc.

MPID(s), list all that apply attaching additional page(s) as necessary:

Member Name

Clearing Firm Name / NSCC #

Signature of Authorized Officer, Partner or Managing
Member or Sole Proprietor

Signature of Authorized Officer, Partner or Managing
Member or Sole Proprietor

Printed Name / Title

Printed Name / Title

Date

Date

Non-Member Clearing Firm Information Document

INFORMATION DOCUMENT – To be completed by the Non-Member Clearing Firm of Members of Cboe BZX Exchange, Inc., Cboe BYX Exchange, Inc., Cboe EDGA Exchange, Inc. and Cboe EDGX Exchange, Inc. (each, an “Exchange”).

The undersigned Clearing Firm represents that it is a member of the National Securities Clearing Corporation (“NSCC”), a clearing agency registered with the Securities Exchange Commission pursuant to Section 17A of the Securities Exchange Act of 1934. The undersigned further represents that it is requesting to have its NSCC participant number added to the Exchange’s system to facilitate clearance and settlement of transactions made by Members of the Exchange.

An executed version of this Document can be delivered to the Exchange via email to MembershipServices@bats.com.

GENERAL INFORMATION		
Clearing Firm Name:		NSCC #:
Address of Principal Office:		
City:	State:	Zip:
BUSINESS CONTACT		
Name:	Email:	
Title:	Phone:	
CLEARING LETTER OF GUARANTEE CONTACT		
Name:	Email:	
Title:	Phone:	
CLEARING BREAKS CONTACT		
Name:	Email:	
Title:	Phone:	

Signature of Authorized Officer, Partner or Managing
Member or Sole Proprietor of Clearing Firm

Printed Name / Title

Date

Sponsored Access Application

In order to join Cboe BZX Exchange, Inc., Cboe BYX Exchange, Inc., Cboe EDGA Exchange, Inc. and Cboe EDGX Exchange, Inc. (collectively, the "Exchange") as a Sponsored Participant, an Applicant and their Sponsoring Member must complete and submit all materials listed on the Application Checklist below via email to MembershipServices@bats.com.

APPLICATION CHECKLIST
<input type="checkbox"/> Sponsored Access Application, including <ul style="list-style-type: none">• Sponsoring Member Consent• Sponsored Participant Agreement
<input type="checkbox"/> A detailed description of how the Sponsoring Member will comply with the requirements of SEC Rule 15c3-5: <i>Risk Management Controls for Brokers or Dealers with Market Access</i>
<input type="checkbox"/> A copy of the Sponsoring Member's Policies and Procedures, specifically addressing SEC Rule 15c3-5
<input type="checkbox"/> User Agreement – per Exchange
<input type="checkbox"/> Securities Routing Agreement – per Exchange
<input type="checkbox"/> IRS Form <u>W-9</u> or <u>W-8</u>

Note: All application materials sent to the Exchange will be reviewed for completeness. All applications are deemed confidential and are handled in a secure environment. Applications may, however, be shared with other self-regulatory organizations (e.g., FINRA), as necessary, to evaluate and process the application.

The Exchange may request Applicants to submit documentation in addition to what is listed in the Application Checklist during the application review process. If you have questions on completing the application, you may direct them to Membership Services at MembershipServices@bats.com or 913.815.7002.

Sponsored Access Application

SPONSORING MEMBER INFORMATION			SPONSORING MEMBER BUSINESS CONTACT	
Firm:			Name:	
Address:			Email:	
City:	State:	Zip:	Phone:	
SPONSORED PARTICIPANT INFORMATION			SPONSORED PARTICIPANT BUSINESS CONTACT	
Firm:			Name:	
Address:			Email:	
City:	State:	Zip:	Phone:	
SPONSORED PARTICIPANT BILLING ADDRESS			SPONSORED PARTICIPANT BILLING CONTACT	
Firm:			Name:	
Address:			Email:	
City:	State:	Zip:	Phone:	

PORT SELECTION
Port Type/Quantity: <input type="checkbox"/> BOE _____ <input type="checkbox"/> FIX _____ <input type="checkbox"/> DROP _____ <input type="checkbox"/> FIX DROP _____ Is the Sponsored Participant allowed to enter Short Sales? <input type="checkbox"/> Yes <input type="checkbox"/> No Is the Sponsored Participant allowed to enter Intermarket Sweep Orders? <input type="checkbox"/> Yes <input type="checkbox"/> No What is the maximum dollar value per order? \$ _____
CONNECTIVITY
Which connectivity option will the Sponsored Participant use? (check one) <input type="checkbox"/> Cross Connect <input type="checkbox"/> Extranet: _____ <input type="checkbox"/> VPN (certification only) What type of connection(s) is the Sponsored Participant requesting? <input type="checkbox"/> Certification <input type="checkbox"/> Production

CLEARING (EQUITIES AND/OR OPTIONS)
Please list the MPID/NSCC # that the Sponsored Participant is permitted to use: _____ / _____ Please list the Executing Firm ID/OCC # that the Sponsored Participant is permitted to use: _____ / _____

AUTHORIZATION	
This form is governed by all terms and conditions set forth in the Exchange Sponsored Access Application and Agreements. The Exchange provides a best effort attempt to cancel all open orders from a Member/Sponsored Participant upon a communications disconnect. There is no guarantee that the automatic cancel feature provided by the Exchange will be error free or will operate without interruption. By signing below, you agree and acknowledge that the Exchange is not liable or responsible in any way for any orders which may fail to be cancelled using the automatic cancel feature. Members may call the Choe Trade Desk at 913.815.7001 to verbally request that all open orders be cancelled or check the status of open orders.	
Sponsoring Member Firm:	Date:
Printed Name/Title:	Signature:

Sponsoring Member Consent

We, _____, a Member of the Exchange, are hereby notifying the Exchange that we intend to be a Sponsoring Member providing access to a Sponsored Participant, as those terms are defined in Exchange Rule 11.3, by permitting the Sponsored Participant identified below to send orders directly to the Exchange using our mnemonic (or the mnemonic of our clearing broker, as applicable).

We acknowledge and agree that we are responsible for all orders entered on or through the Exchange by the Sponsored Participant and any person acting on behalf of or in the name of such Sponsored Participant. We further acknowledge and agree that we must be identified on any order submitted by the Sponsored Participant as the Sponsoring Member of that order, and that any execution occurring as a result of an order entered by a Sponsored Participant shall be binding in all respects on us. In that regard, we acknowledge and agree that we are acting as agent for the person submitting the order through sponsored access, and as such, that we are responsible for all related contractual and regulatory obligations. We further acknowledge and agree that we are responsible for any and all actions taken by the Sponsored Participant or any person acting on behalf of or in the name of the Sponsored Participant on or through the Exchange.

In addition to Exchange Rule 11.3, we have further reviewed other provisions of the Rules of the Exchange and the terms of our User Agreement with the Exchange. The Sponsored Participant has agreed to comply with all applicable Rules of the Exchange governing the entry, execution, reporting, clearing and settling of orders in securities eligible for trading on the Exchange. We understand that we are required and agree to impose appropriate regulatory and supervisory procedures in connection with orders directed to the Exchange by the Sponsored Participant.

Sponsoring Member Name

CRD Number

Signature of Authorized Officer, Partner, Managing
Member or Sole Proprietor

Date

Printed Name

Title

Sponsored Participant Agreement

On behalf of the Sponsored Participant, the undersigned agrees to comply with the Exchange Certificate of Incorporation, Bylaws, and Rules of the Exchange, and all written interpretations thereof, as if Sponsored Participant were a Member of the Exchange. These requirements include, but shall not be limited to, the items listed below.

The Sponsored Participant:

- shall enter into and maintain a User Agreement with the Exchange;
- shall enter into and maintain a Routing Agreement with Cboe Trading, Inc., if it will use the routing services provided by that entity;
- shall maintain, keep current and provide to the Sponsoring Member, and to the Exchange upon request, a list of Authorized Traders who may obtain access to the System on behalf of the Sponsored Participant. Sponsored Participant shall be subject to the obligations of Exchange Rule 11.4 with respect to such Authorized Traders;
- shall familiarize its Authorized Traders with all of its obligations under Exchange Rule 11.3 and will assure that they receive appropriate training prior to any use or access to the Exchange;
- may not permit anyone other than Authorized Traders to use or obtain access to the Exchange;
- shall take reasonable security precautions to prevent unauthorized use or access to the Exchange, including unauthorized entry of information into the Exchange, or the information and data made available therein. Sponsored Participant understands and agrees that Sponsored Participant is responsible for any and all orders, trades and other messages and instructions entered, transmitted or received under identifiers, passwords and security codes of Authorized Traders, and for the trading and other consequences thereof;
- acknowledges its responsibility to establish adequate procedures and controls that permit it to effectively monitor its employees', agents', and customers' use and access to the Exchange for compliance with the terms of this agreement; and
- shall pay when due all amounts, if any, payable to Sponsoring Member, the Exchange or any other third parties that arise from the Sponsored Participant's access to and use of the Exchange. Such amounts include, but are not limited to applicable Exchange and regulatory fees.

Authorized Acknowledgement of Sponsored Participant:

The undersigned, as a duly appointed Officer, Partner, Managing Member, or Sole Proprietor of the applicant Sponsored Participant, does hereby acknowledge and agree to the terms and provisions of Exchange Rule 11.3, and shall comply with the Exchange Rules, as amended

Sponsored Participant Name

CRD Number (if applicable)

Signature of Authorized Officer, Partner, Managing
Member or Sole Proprietor

Date

Printed Name

Title

Service Bureau Application and Agreements

SERVICE BUREAU INFORMATION

Firm:			
Address:			
City:		State:	Zip:
BUSINESS CONTACT		TECHNICAL CONTACT	
Name:		Name:	
Email:		Email:	
Phone:		Phone:	
BILLING ADDRESS		BILLING CONTACT	
Firm:		Name:	
Address:		Email:	
City:	State:	Zip:	Phone:

PORT SELECTION

Port Type/Quantity: ☐ BOE _____ ☐ FIX _____ ☐ DROP _____ ☐ FIX DROP _____

CONNECTIVITY

Which connectivity option will you use? (check one)

☐ Cross Connect* ☐ Extranet: _____ ☐ VPN (certification only)

What type of connections are you requesting? ☐ Certification ☐ Production

*If requesting a cross connect, a Connectivity Services Agreement is also required.

AUTHORIZATION

This form is governed by all of the terms and conditions set forth in the Service Bureau Application and Agreements. The persons listed above are the only individuals authorized to order or update services at Cboe on behalf of the Service Bureau. Please contact Membership Services at 913.815.7002 or email MembershipServices@bats.com to add or delete authorized contacts.

Cboe provides a best effort attempt to cancel all open orders from a Member/Service Bureau upon a communications disconnect. There is no guarantee that the automatic cancel feature provided by Cboe will be error free or operate without interruption. By signing below, you agree and acknowledge that Cboe is not liable or responsible in any way for any orders which may fail to be cancelled using the automatic cancel feature. **Members may call the Cboe Trade Desk at 913.815.7001 to verbally request that all open orders be cancelled or check the status of open orders.**

Printed Name:

Signature:

Title:

Date:

Service Bureau Port Fee Agreement

This Service Bureau Port Fee Agreement (this "Agreement"), with an effective date as of the date executed below, is made by and among each of Cboe BZX Exchange, Inc., Cboe BYX Exchange, Inc., Cboe EDGA Exchange, Inc., Cboe EDGX Exchange, Inc., Cboe Exchange, Inc., Cboe C2 Exchange, Inc., and Cboe Futures Exchange, LLC (collectively, the "Exchange"), all with principal offices at 400 S. LaSalle Street, Chicago, Illinois 60605, and the Authorized Service Bureau or Independent Software Vendor referenced below ("Service Bureau").

- 1. Rights of Service Bureau.** The Exchange has granted to Service Bureau the non-exclusive and non-transferable right to act as the Authorized Service Bureau for one or more Members or Trading Permit Holders (as applicable) of the Exchange pursuant to one or more Service Bureau Agreements.
- 2. Exchange Users and Data Recipients.** If Service Bureau has entered into a User Agreement with the Exchange (as may be amended, modified or supplemented from time to time, the "User Agreement"), pursuant to which Service Bureau has the right to access the Exchange to, among other things, submit orders to the Exchange and/or has entered into a U.S. Market Data Agreement with Cboe Data Services, LLC (as may be amended, modified or supplemented from time to time, the "Data Agreement"), pursuant to which Service Bureau has the right to receive and redistribute data feeds, then this Agreement shall be deemed to be a supplement to such agreements and all terms and provisions of such agreements which are not expressly overridden by the terms and conditions of this Agreement shall be incorporated herein by reference.
- 3. All other Service Bureaus.** If Service Bureau has not entered into a User Agreement or Data Agreement, by signing this Agreement, Service Bureau has the right to access the Exchange to act as an Authorized Service Bureau only if in conformity with the requirements expressly described below.
- 4. Port Fees.** Service Bureau agrees to make timely payment of fees charged specifically for linking to Exchange in order to act as an Authorized Service Bureau on behalf of one or more Members, Trading Permit Holders, or Trading Privilege Holders (as applicable) of the Exchange, as well as any applicable late fees for the failure to make payment within the required time period. The amount of applicable Port Fees shall be set forth in Exchange Rules or posted on the Exchange's web site. Port Fees are payable within 30 days of the invoice date. Service Bureau will be solely responsible for any and all other telecommunications costs and all other expenses incurred in linking to and maintaining its link to, Exchange. Failure to make payments within 30 days from the invoice date may result in suspension or termination of the Service Bureau Agreement(s) between Exchange and Service Bureau. Subject to applicable regulatory requirements, Exchange reserves the right to change its fee schedule, including Port Fees applicable to Services Bureau. Exchange will use commercially reasonable efforts to provide reasonable advance notice to Service Bureau of any such change to Port Fees, provided, however, that such notice shall be not less than 30 days prior to the effectiveness of the change, except to the extent a shorter period is: (i) required due to any situation that necessitates a change to Port Fees on an accelerated basis or otherwise precludes such advance notice, or (ii) required pursuant to an order of a court, an arbitrator or a regulatory agency.
- 5. Term and Termination.** This Agreement, subject to earlier termination in accordance with its terms, shall continue until it is terminated at any time on not less than 24 hours written notice given by either party to the other.
- 6. Several Obligations.** All obligations of each Exchange are several and not joint, and in no event shall an Exchange have any liability or obligation with respect to the acts or omissions of any other Exchange to this Agreement.
- 7. Miscellaneous.** All notices or approvals required or permitted under this Agreement must be given in writing to Exchange at the address specified above or to Service Bureau at its last reported principal office address, unless Service Bureau designates a different address. Any waiver or modification of this Agreement will not be effective unless executed in writing and signed by the other party. This Agreement constitutes the sole and entire agreement of the parties to this Agreement, and supersedes all prior and contemporaneous understandings, agreements, representations and warranties, both oral and written, with respect to such subject matter; however, execution of this Agreement does not in any way affect the enforceability of any previously executed Service Bureau Agreement entered into by and among any Exchange, Service Bureau and Member of such Exchange, This Agreement will bind each party's successors-in-interest. Service Bureau may not assign this Agreement (including by operation of law) without the prior written consent of

the Exchange, provided, however, that the Exchange shall not unreasonably withhold such consent. This Agreement will be governed by and interpreted in accordance with the internal laws of the State of New York. Both parties submit to the jurisdiction of the state and federal courts in and for the State of New York for the resolution of any dispute arising under this Agreement. If any provision of this Agreement is held to be unenforceable, in whole or in part, such holding will not affect the validity of the other provisions of this Agreement. This Agreement may be executed in one or more counterparts, which shall each be considered an original but all of which shall constitute one and the same Agreement.

IN WITNESS WHEREOF the parties hereto have caused this Agreement to be executed by their duly authorized officers.

Cboe BZX Exchange, Inc.; Cboe BYX Exchange, Inc.;
Cboe EDGA Exchange, Inc.; Cboe EDGX Exchange, Inc.;
Cboe Exchange, Inc.; Cboe C2 Exchange, Inc.;
Cboe Futures Exchange, LLC

Service Bureau:_____

Signature:_____

Printed Name:_____

Title:_____

Signature:_____

Printed Name:_____

Title:_____

Date:_____

Service Bureau Agreement

1. This Service Bureau Agreement (this "Agreement") is by and among each of Cboe BZX Exchange, Inc. ("BZX"), Cboe BYX Exchange, Inc. ("BYX"), Cboe EDGA Exchange, Inc. ("EDGA"), Cboe EDGX Exchange, Inc. ("EDGX"), Cboe Exchange, Inc. ("Cboe"), Cboe C2 Exchange, Inc. ("C2") and Cboe Futures Exchange, LLC ("CFE" and collectively with BZX, BYX, EDGA, EDGX, Cboe and C2, the "Exchange"), with principal offices at 400 S. LaSalle Street, Chicago, Illinois 60605, the Member or Trading Permit Holder (as applicable) of the Exchange designated below (collectively, "Member"), and the Authorized Service Bureau or Independent Software Vendor designated below ("Service Bureau").
 2. The Service Bureau acknowledges that it is a party to a Service Bureau Port Fee Agreement with the Exchange.
 3. This Agreement authorizes the Service Bureau to route orders and any modifications thereto to the Exchange on behalf of the Member.
 4. By executing this Agreement, the undersigned Member agrees that it is responsible for all orders using its MPID/EFID entered on the Exchange through or by the Service Bureau. The Member also agrees to accept and honor all trades executed on the Exchange as a result of orders routed to the Exchange through or by the Service Bureau using the Member's mnemonic, regardless of whether such orders were provided to the Exchange in error by the Service Bureau.
 5. The Member understands and agrees that it is its sole responsibility to immediately notify the Exchange in the event that it wishes to terminate this Agreement.
 6. This Agreement, subject to earlier termination in accordance with its terms, shall continue until it is terminated at any time on not less than 24 hours written notice given by either party to the other.
 7. This Agreement shall be governed by the laws of the state of New York without regard to its choice of law provisions.
- IN WITNESS WHEREOF** THE PARTIES HAVE EXECUTED THIS SERVICE BUREAU AGREEMENT EFFECTIVE AS OF THE DATE OF EXECUTION BY THE EXCHANGE SET FORTH BELOW.

Service Bureau:

Member:

Cboe BZX Exchange, Inc.;
Cboe BYX Exchange, Inc.;
Cboe EDGA Exchange, Inc.;
Cboe EDGX Exchange, Inc.;
Cboe Exchange, Inc.;
Cboe C2 Exchange, Inc.;
Cboe Futures Exchange, LLC

Signature

Signature

Signature

Printed Name

Printed Name

Printed Name

Title (must be an officer)

Title (must be an officer)

Title (must be an officer)

Name of Service Bureau

Name of Firm

Date

Service Bureau Contact

Date

Email Address of Contact Person

MPID or EFID of Member

This agreement should apply to the Exchanges noted below:

☐ BZX ☐ BYX ☐ EDGA ☐ EDGX ☐ BZX Options ☐ EDGX Options ☐ Cboe ☐ C2 ☐ CFE

Connectivity Services Agreement

This Connectivity Services Agreement ("Agreement") is a binding agreement among you ("User") and each of Cboe BZX Exchange, Inc., Cboe BYX Exchange, Inc., Cboe EDGA Exchange, Inc., Cboe EDGX Exchange, Inc. and Cboe Futures Exchange, LLC (collectively, the "Exchange"), with principal offices at 400 S. LaSalle Street, Chicago, Illinois 60605, and shall be effective as of the date executed on the signature page hereof (the "Effective Date").

1. Services. This Agreement authorizes User to receive the Services. As used in this Agreement, "Services" shall mean (i) those services described on User's connectivity order form (the "Order Form") and (ii) any other connectivity services provided by the Exchange to User to the extent such services are not addressed by another agreement between the Exchange and User. User acknowledges and agrees that nothing in this Agreement constitutes an understanding by the Exchange to continue any aspect of the Services in their current form. The Exchange may from time to time make additions, deletions or modifications to the Services. In such event, the Exchange shall use commercially reasonable efforts to notify User prior to any such change becoming effective. User's continued use of the Services following the modification will constitute User's acceptance of the modification.

2. Connectivity and Redistribution. User is solely responsible for providing and maintaining all necessary electronic communications required to link to the Services, including wiring, computer hardware, software, communication line access, and networking devices (as applicable). This Agreement authorizes User to access the Exchange, whether physically or logically, in order to provide Authorized Third Parties (as defined herein) with access to the Exchange and/or certain data feeds associated therewith and/or certain other authorized non-Exchange services. In order to receive and/or redistribute Exchange data, User shall also enter into a market data agreement with the Exchange (the "Data Agreement"). Nothing herein shall limit User's requirements and obligations arising under the Data Agreement, if applicable. User shall take reasonable security precautions to prevent unauthorized individuals or entities from gaining access to the Exchange. User shall comply with all reasonable security specifications or requirements of the Exchange in order to prevent the Exchange and Exchange data from being improperly used or accessed, or from being improperly taken. User shall not provide any third party with access to the Exchange or Exchange data unless such third party is an Authorized Third Party, pursuant to the Exchange's prior written consent. For purposes of this Agreement, an "Authorized Third Party" is a party that the Exchange has approved to connect to the Exchange via connectivity supplied by User and/or to receive Exchange data or other Exchange authorized services transmitted through User.

2.1 Approval and Termination Notice Requirements. In order for a party to be approved as an Authorized Third Party, User must submit a request to the Exchange that includes the name and contact information of the party to whom connectivity will be provided. The Exchange will typically approve or reject a request within two (2) business days, but is under no obligation to respond within that time frame. Where a request is rejected by the Exchange, User may not provide the applicable party with connectivity to the Exchange. In the event User desires to terminate the provision of Services to an Authorized Third Party, User must submit written notice to the Exchange that identifies the name of the Authorized Third Party and the effective date of such termination. All notifications submitted to the Exchange pursuant to this Agreement shall be given in accordance with the applicable Connectivity Manual, available [here](#) or [here](#) (Cboe Futures Exchange only), each as may be amended from time to time (the "Connectivity Manual"). If any Authorized Third Party fails to comply with any of the conditions, terms or provisions of this Agreement, as applicable to such Authorized Third Party, a Data Agreement, or any other agreement between an Authorized Third Party and the Exchange or an affiliate of the Exchange, and the Authorized Third Party has failed to cure such non-compliance within the cure period, if any, set forth in the applicable agreement, or if an Authorized Third Party has made any representation in any such agreement which was or has become untrue, then User shall, within five (5) business days after receipt of notice from the Exchange of such failure or untruth, cease providing access to the Exchange and/or Exchange data to such Authorized Third Party and shall, within seven (7) business days following the receipt of such notice, confirm such cessation by notice to the Exchange.

2.2 List of Authorized Third Parties. User shall maintain, keep current, and provide to the Exchange promptly upon request a list of Authorized Third Parties to whom User provides access to the Exchange and/or certain data feeds associated therewith. Unless otherwise provided by the Exchange, User shall use reasonable efforts to respond to such a request within fifteen (15) days of receipt of the request.

2.3 Network Requirements. User must comply with all applicable Cboe Global Markets Network Requirements, contained in the Connectivity Manual. The Exchange will provide notice of any material amendments to the Cboe Global Markets Network Requirements and User shall comply with the amended Cboe Global Markets Network Requirements within thirty (30) days of receipt of such notice.

3. Fees.

3.1 Services Fees. User agrees to make timely payment of all Services fees, as well as any applicable late fees, in accordance with the payment terms set forth in the Order Form or, if none are specified, within thirty (30) days of the invoice date. In the event of User's failure to make payment within such time period, the Exchange reserves the right to terminate the subject Service or Services upon notice to User. User will be solely responsible for any and all telecommunications costs and all other expenses incurred in linking to, and maintaining its link to, the Services. User shall pay the Exchange a late charge in the amount of 1% per month on all past due amounts that are not the subject of a legitimate and bona fide dispute.

3.2 Adjustments to Services Fees. The Exchange may adjust the fees for the Services upon reasonable notice to User; provided, however, that the Exchange may pass through to User, without notice, any third party charges, fees, taxes, or terms and conditions incurred by the Exchange in connection with the provision of Services. If User is receiving a physical connection from the Exchange, User may acquire a physical connection for transition purposes at no additional cost, provided that User transitions its connection within three (3) weeks from the date at which the replacement connection is live (i.e., the Exchange switchport is configured and connected to a User circuit or cross-connect). If, after three (3) weeks, the legacy connection is not terminated, User will be charged for an additional connection.

4. Term. The initial, one (1) month term of this Agreement shall commence upon the Effective Date and shall automatically renew for additional one (1) month terms at the beginning of each subsequent calendar month thereafter, unless terminated by User or the Exchange as provided below.

5. Termination.

5.1 By User. User may terminate this Agreement, or cancel any physical connection provided hereunder, upon thirty (30) days' prior written notice to the Exchange.

5.2 By the Exchange. The Exchange may terminate this Agreement, any or all of the Services provided hereunder, or any authorization to allow connectivity to an Authorized Third Party at any time or from time to time upon thirty (30) days' prior written notice to User. Notwithstanding the foregoing, the Exchange may suspend or terminate the Services immediately upon notice to User if it determines, in the Exchange's sole reasonable discretion, that: (i) User has breached any material term of this Agreement; (ii) User is engaged in activities that the Exchange determines are or may be detrimental to the Exchange, its investors or its Exchange Members or Trading Privilege Holders (each as defined in the Exchange Rules), as applicable including without limitation detrimental to the performance and operation of the Services; (iii) User has become insolvent; has made an assignment for the benefit of creditors; is not paying debts as they become due, or admits, in writing, its inability to pay debts when due; has filed, or has filed against it, any petition under any applicable bankruptcy laws or an application for a receiver, trustee, or custodian of User is made by anyone; or User becomes the subject of any proceedings of bankruptcy, insolvency, reorganization, dissolution, receivership, liquidation or arrangement, adjustment, or composition, or otherwise poses a credit risk to the Exchange, its investors or its Exchange Members or Trading Privilege Holders, as applicable; (iv) User is retransmitting or republishing any Exchange data feeds, including market data, or providing any connectivity to the Exchange without the prior approval of the Exchange; (v) User has violated any Exchange Rules; or (vi) if User is a Member or Trading Privilege Holder of an Exchange, User ceases to be a Member or Trading Privilege Holder in good standing with the applicable Exchange, or User is otherwise no longer authorized to use the Services; or (vii) any representations or warranties made by User in connection with this Agreement are or become false or misleading.

5.3 Consequences of Termination. Upon the termination of this Agreement for any reason, all rights granted to User hereunder will cease and User shall immediately pay to the Exchange any and all amounts owed to the Exchange under this Agreement, including without limitation all Services fees owed in respect of the entirety of the then current calendar month (e.g., if the Agreement is terminated on February 15th, Users shall nevertheless be required to pay the Exchange the monthly Services fees for the entirety of the month of February). The following Sections will survive the termination or expiration of this Agreement for any reason: Sections 3, 5.3, and 6 through 14. In no event will termination of this Agreement relieve User of any obligations incurred prior to the effective date of termination or through its use of or connection to the Services.

6. Disclaimer of Warranty. THE SERVICES ARE PROVIDED AS-IS, WITHOUT WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED CONDITIONS OR WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE, ANY IMPLIED WARRANTY ARISING FROM TRADE USAGE, COURSE OF DEALING OR COURSE OF PERFORMANCE, AND OF ANY OTHER WARRANTY OR OBLIGATION WITH RESPECT TO ANY SOFTWARE OR OTHER MATERIALS, OR ANY SERVICES, MADE

AVAILABLE TO USER, AND ALL SUCH OTHER WARRANTIES ARE HEREBY DISCLAIMED. THERE IS NO GUARANTEE THAT THE SERVICES PROVIDED BY THE EXCHANGE WILL MEET USER'S REQUIREMENTS, BE ERROR FREE, OR OPERATE WITHOUT INTERRUPTION. THE EXCHANGE GIVES NO WARRANTIES OF ANY KIND AS TO THE FITNESS, CAPACITY, OR CONDUCT OF ANY OTHER PERSON HAVING ACCESS TO THE SERVICES AND SHALL NOT BE HELD LIABLE TO OR THROUGH USER OR OTHERWISE FOR ANY USE OR ABUSE WHATSOEVER OF THE SERVICES BY ANOTHER PERSON HAVING ACCESS TO THE SERVICES INCLUDING, WITHOUT LIMITATION, ANY FAILURE TO CONCLUDE TRANSACTIONS OR OBSERVE APPLICABLE MARKET REGULATIONS OR CONVENTIONS OR TO PAY REQUISITE TAXES OR OTHER CHARGES ON ANY TRANSACTIONS OR TO OTHERWISE ACT LAWFULLY.

7. No Consequential Damages. ABSENT FRAUD OR WILLFUL MISCONDUCT BY THE EXCHANGE OR A CLAIM ARISING OUT OF THE EXCHANGE'S INDEMNIFICATION OBLIGATIONS (AS DESCRIBED BELOW), UNDER NO CIRCUMSTANCES WILL THE EXCHANGE OR ITS AGENTS, AFFILIATES OR LICENSORS BE LIABLE FOR ANY LOSS, DAMAGE, CLAIM OR EXPENSE, INCLUDING WITHOUT LIMITATION ANY DIRECT, CONSEQUENTIAL, INDIRECT, SPECIAL, PUNITIVE OR INCIDENTAL DAMAGES OR LOST PROFITS, WHETHER FORESEEABLE OR UNFORESEEABLE, BASED ON USER'S CLAIMS OR THE CLAIMS OF ITS CUSTOMERS, EMPLOYEES OR AGENTS (INCLUDING, BUT NOT LIMITED TO, CLAIMS FOR LOSS OF DATA, GOODWILL, USE OF MONEY OR USE OF THE SERVICES, INTERRUPTION IN USE OR AVAILABILITY OF THE SERVICES, STOPPAGE OF OTHER WORK OR IMPAIRMENT OF OTHER ASSETS), ARISING OUT OF BREACH OR FAILURE OF EXPRESS OR IMPLIED WARRANTY, BREACH OF CONTRACT, MISREPRESENTATION, NEGLIGENCE, STRICT LIABILITY IN TORT OR OTHERWISE. THIS SECTION WILL NOT APPLY ONLY WHEN AND TO THE EXTENT THAT APPLICABLE LAW SPECIFICALLY REQUIRES LIABILITY, DESPITE THE FOREGOING EXCLUSION AND LIMITATION. NOTWITHSTANDING THE FOREGOING, BUT SUBJECT TO THE EXPRESS LIMITS SET FORTH BELOW, THE EXCHANGE MAY BE LIABLE TO USER, IF USER IS AN EXCHANGE MEMBER OR TRADING PRIVILEGE HOLDER, TO THE EXTENT SUCH LIABILITY ARISES BASED ON ITS THEN APPLICABLE EXCHANGE RULE CONCERNING LIMITATION OF LIABILITY. EXCEPT FOR FRAUD, WILLFUL MISCONDUCT, OR A CLAIM ARISING OUT OF THE EXCHANGE'S INDEMNIFICATION OBLIGATIONS STATED BELOW, THE EXCHANGE'S TOTAL LIABILITY IN RESPECT OF ANY AND ALL CLAIMS ARISING FROM OR RELATED TO THIS AGREEMENT, IN CONTRACT, TORT, OR OTHERWISE, WILL BE LIMITED TO THE LESSER OF: (i) ACTUAL DAMAGES INCURRED BY CLIENT AS A DIRECT RESULT OF THE EXCHANGE'S ACT OR OMISSION, AND (ii) \$10,000.

8. Indemnification by User. User agrees to indemnify and hold harmless the Exchange, its owners, subsidiaries, and affiliates, its and their respective officers, directors, employees, and agents, and any related persons and entities, from and against all expenses and costs and damages (including any reasonable legal fees and expenses), direct, consequential, and/or incidental in nature, claims, demands, proceedings, suits, and actions, and all liabilities resulting from, in connection with, or arising out of any failure by User, for any reason, fraudulent, negligent or otherwise, to comply with its obligations under this Agreement, unless such expenses, costs, damages, claims, demands, proceedings, suits, actions, or liabilities arise from the Exchange's willful misconduct, fraud or breach of the Exchange's obligations under this Agreement.

9. Indemnification by the Exchange. The Exchange agrees to indemnify, defend and hold harmless User and its subsidiaries and affiliates, and its and their respective officers, directors, employees, and agents, from and against all expenses and costs and damages (including any reasonable legal fees and expenses), direct, consequential, and/or incidental in nature, claims, demands, proceedings, suits, and actions, and all liabilities resulting from, in connection with, or arising out of any third party claim that the Exchange or the Services, or User's use thereof, infringes any copyright, patent, trademark, trade secret or other intellectual property right. All obligations of each Exchange are several and not joint, and in no event shall an Exchange have any liability or obligation with respect to the acts or omissions of any other Exchange to this Agreement.

10. Assignment. User's rights hereunder to use the Services during the term of this Agreement are personal, nonexclusive and nontransferable. User shall not assign, delegate or otherwise transfer this Agreement, or any of its rights or obligations hereunder, without the Exchange's prior approval, which will not be unreasonably withheld. The Exchange may assign or transfer this Agreement, or any of its rights or obligations hereunder, to a related or unrelated party, upon notice to User.

11. Force Majeure. Neither party to this Agreement will be liable for delay or failure to perform its obligations hereunder (other than a failure to pay amounts when due) caused by an event that is beyond the party's control; provided, however, that such party will not have contributed in any way to such event.

12. Severability. Each provision of this Agreement will be deemed to be effective and valid under applicable law, but if any provision of this Agreement is determined to be invalid, void, or unenforceable under any law, rule, administrative order or judicial decision, that determination will not affect the validity of the remaining provisions of this Agreement.

13. Amendment. This Agreement may be amended from time to time by the Exchange in its sole discretion, and the Exchange shall provide reasonable notice to User prior to any such amended Agreement becoming effective. Use of any Services following any amendment of this Agreement becoming effective shall constitute User's agreement to such amendment.

14. Miscellaneous. All notices or approvals required or permitted under this Agreement must be given in writing to the Exchange at the address specified above or to User at its last reported principal office address. No waiver under this Agreement will be effective unless executed in writing and signed by the party waiving any of its rights hereunder. This Agreement will bind each party's successors-in-interest. This Agreement will be governed by and interpreted in accordance with the internal laws of the State of New York, USA. Both parties submit to the jurisdiction of the state and federal courts in and for the State of New York, USA for the resolution of any dispute arising under this Agreement. This Agreement, together with the Order Form, any addendums or schedules hereto and any other documents incorporated by reference, constitutes the complete and entire statement of all conditions and representations of the agreement between the Exchange and User with respect to its subject matter, and supersedes all prior writings or understandings with respect to such subject matter. In the event of any conflict between the business terms of the main body of this Agreement and any business terms set forth in an Order Form, such terms set forth in the Order Form shall govern.

IN WITNESS WHEREOF the parties hereto have caused this Agreement to be executed by their duly authorized officers.

User: _____ Signature: _____ Printed Name: _____ Title: _____	Cboe BZX Exchange, Inc.; Cboe BYX Exchange, Inc.; Cboe EDGA Exchange, Inc.; Cboe EDGX Exchange, Inc.; Cboe Futures Exchange, LLC Signature: _____ Printed Name: _____ Title: _____ Date: _____
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USER INFORMATION			
Firm:			
Address:			
City:		State:	Zip:
BUSINESS CONTACT		TECHNICAL CONTACT	
Name:		Name:	
Email:		Email:	
Phone:		Phone:	
BILLING ADDRESS		BILLING CONTACT	
Firm:		Name:	
Address:		Email:	
City:	State:	Zip:	Phone:

Extranet Addendum to the Connectivity Services Agreement

This Addendum (this "Addendum"), with an effective date as of the date executed on the signature page hereof, is made by and among each of Cboe BZX Exchange, Inc., Cboe BYX Exchange, Inc., Cboe EDGA Exchange, Inc., Cboe EDGX Exchange, Inc. and Cboe Futures Exchange, LLC (collectively, the "Exchange") and the user referenced below ("User"). Terms not defined in this Addendum shall have the meanings set forth in that certain Connectivity Services Agreement executed by and between the Exchange and User, as may be amended from time to time (the "Connectivity Services Agreement").

User's execution of this Addendum is optional. By signing this Addendum, User identifies itself as an extranet (an "Extranet") and agrees to adhere to all obligations of an Extranet as set forth in the U.S. Equities/Options/Futures Extranet Manual, as may be amended from time to time (the "Extranet Manual"), and authorizes the Exchange to identify User as an Extranet and to include User's sales contact and service offerings in materials made publicly available on the Exchange's website:

Executed versions of this Addendum and any other requested documents can be delivered to the Exchange via email to MembershipServices@bats.com.

TERMS OF ADDENDUM

Whereas the Exchange provides certain services to User pursuant to the Connectivity Services Agreement and User desires to continue to use such services as modified below. For good and valuable consideration, User and the Exchange agree as follows:

1. Scope. This Addendum shall be deemed to supplement the Connectivity Services Agreement. Except as set forth herein, all of the terms and conditions of the Connectivity Services Agreement are hereby incorporated by reference and shall remain in full force and effect and are not superseded or amended by this Addendum; provided, however, that in the event of a conflict between the terms and conditions of this Addendum and the terms and conditions of the Connectivity Services Agreement, the terms and conditions of this Addendum control.

2. Modification of Connectivity Services Agreement. User hereby requests that the Exchange identify User as an Extranet and hereby acknowledges and agrees to adhere to all requisite obligations of an Extranet as specified in the Extranet Manual. Such obligations include, without limitation, having provisioned redundant, high speed connections to the Exchange for use by multiple Exchange Members or Trading Privilege Holders. The Exchange agrees that it will include User's sales contact and service offerings in materials made publicly available by the Exchange, including publication on the Exchange's website and/or any other promotional materials as determined in the Exchange's reasonable discretion, within two (2) weeks of both execution of this Addendum and verification that User is in compliance with the specific Extranet requirements set forth in the Extranet Manual.

3. Obligations of Extranet. By entering into this Addendum, User acknowledges and agrees to the following:

(a) User has no rights in or to Exchange data, except for the right to transmit the Exchange data to the degree permitted under this Addendum, the Connectivity Services Agreement and the Data Agreement. User acknowledges and agrees that the Exchange has (i) proprietary rights in the information and data that originates on, derives from or relates to markets that are regulated, operated or administered by the Exchange, in the information and data that relates to individuals and entities that are regulated by the Exchange, and in the information and data that relates to activities that are regulated or operated by the Exchange, and (ii) compilation rights or other rights in information and data gathered from other sources. All Exchange data, including without limitation any and all intellectual property rights inherent therein or appurtenant thereto, shall, as between the parties, be and remain the sole and exclusive property of the Exchange. User shall not, by act or omission, diminish or impair in any manner the acquisition, maintenance, and full enjoyment by the Exchange, its licensees, transferees and assignees, of the proprietary rights of the Exchange to Exchange data and the Exchange's networks and system.

(b) User agrees (i) not to format, display, access (except to the degree reasonably necessary to maintain the security of User's network and not otherwise in violation of this Addendum or the Connectivity Services Agreement) or alter Exchange data received through and from its connection to the Exchange; (ii) not to affect the integrity of Exchange data; and (iii) not to render Exchange data inaccurate, unfair, uninformative, fictitious, misleading, or discriminatory. User represents that it will not interfere with or adversely affect any of the component parts or processes of Exchange data, its connection to any of the Exchange's systems, or any use thereof by any other Authorized Third Party.

IN WITNESS WHEREOF the parties hereto have caused this Addendum to be executed by their duly authorized officers.

User: _____	Cboe BZX Exchange, Inc.; Cboe BYX Exchange, Inc.; Cboe EDGA Exchange, Inc.; Cboe EDGX Exchange, Inc.; Cboe Futures Exchange, LLC
Signature: _____	Signature: _____
Printed Name: _____	Printed Name: _____
Title: _____	Title: _____
	Date: _____



Cboe Global Markets
17 State Street
New York, NY 10017

Cboe Connect Order
Form

v1.0

Cboe Connect Order Form

Is the Client Information the same as provided on the Connectivity Services Agreement? ☐ Yes ☐ No If No, please provide information below.

<input type="text"/>	<input type="text"/>	<input type="text"/>
Business Contact Name	Email	Contact number
<input type="text"/>	<input type="text"/>	<input type="text"/>
Technical Contact Name	Email	Contact number

<input type="text"/>	<input type="text"/>
Billing Contact Name	Address
<input type="text"/>	<input type="text"/>
Email/Contact Phone	City, State, ZIP

Service Selection

Market Data Connectivity*

Selection	Data Feed	Fee Per Month
<input type="checkbox"/> Add <input type="checkbox"/> Remove		
<input type="checkbox"/> Add <input type="checkbox"/> Remove		
<input type="checkbox"/> Add <input type="checkbox"/> Remove		
<input type="checkbox"/> Add <input type="checkbox"/> Remove		
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<input type="checkbox"/> Add <input type="checkbox"/> Remove		
<input type="checkbox"/> Add <input type="checkbox"/> Remove		

Total \$ 0.00

Fee covers both A and B feeds (over independent cross-connects) and is for connectivity only.
*Firms will be required to pay any exchange related data fees directly to the exchange.

Unicast Access (Order Entry)**

Selection	Bandwidth	
<input type="checkbox"/> Add <input type="checkbox"/> Remove		
<input type="checkbox"/> Add <input type="checkbox"/> Remove		
<input type="checkbox"/> Add <input type="checkbox"/> Remove		
<input type="checkbox"/> Add <input type="checkbox"/> Remove		

***Additional fees apply for access to NYSE, ARCA or MKT \$ 0.00

Grand Total \$ 0.00

**Per cross-connect per destination location.

***Multicast and unicast access to NYSE Markets carry an additional \$1,200 and/or \$1,000/month connection fees, respectively, passed through via SFTI.

<input type="text"/>	
Client (Firm Name)	
<input type="text"/>	
Print Person Name	
<input type="text"/>	<input type="text"/>
Authorized Signature	Date

Cboe Global Markets
U.S. Market Data Agreement
(Formerly the Bats Global Markets Data Agreement)

This Cboe Global Markets U.S. Market Data Agreement (this "Agreement"), with an effective date as of the date executed on the signature page hereof, is made by and between CDS and Data Recipient.

1. **Definitions.** The following terms, when used in this Agreement, shall have the meanings set forth below:

"Act" shall mean the Securities Exchange Act of 1934, as amended.

"Additional Agreements" shall mean the User Agreement, Cboe Global Markets Data Feed Order Form and System Description, Direct Edge System Description/Data Feed Request, Price List, Fee Schedule, and any additional terms and conditions, policies or agreements entered into in writing by Data Recipient with CDS or any of its predecessors or affiliates (including without limitation Bats Global Markets, Inc. and Bats Hotspot LLC) relating to the subject matter hereof.

"Agreement" shall mean this Cboe Global Markets U.S. Market Data Agreement, including any attachments or documents referenced or incorporated herein, as may be amended, modified, or supplemented from time to time.

"Cboe Specifications" shall mean the written specifications, as may be amended, modified, or supplemented from time to time, for the System with which Data Recipient's system must comply.

"CDS" shall mean, collectively, Cboe Data Services, LLC, a Delaware limited liability company, with its principal offices at 400 South LaSalle Street, Chicago, Illinois 60605, and its affiliates, including, without limitation, the Exchanges.

"CDS Indemnified Parties" shall mean, collectively, CDS and its subsidiaries, affiliates, and its and their respective owners, officers, directors, employees, and agents.

"CDS Invoiced Subscribers" shall mean any Data User that CDS, or one of its affiliates, chooses to invoice directly, as distinguished from Data Recipient Invoiced Subscribers.

"Claims and Losses" shall mean any and all liabilities, obligations, losses, damages, penalties, claims, actions, suits, costs, judgments, settlements and expenses of any nature, whether incurred by or issued against an indemnified party or a third-party, including, without limitation, (a) indirect, special, punitive, consequential or incidental loss or damage, and (b) reasonable administrative costs, investigatory costs, litigation costs and auditors' and attorneys' fees and expenses (including in-house personnel).

"Connectivity Fees" shall mean fees charged specifically for connecting to Exchange in order to receive Exchange Data.

"Data Feed Subscriber" shall mean any Data User outside of Data Recipient that (a) receives Exchange Data from Data Recipient and (b) for which Data Recipient cannot substantially control Exchange Data for the purpose of reporting usage or qualification.

"Data Fees" shall mean fees charged in connection with the use or redistribution of Exchange Data.

"Data Recipient" shall mean the data recipient referenced below and its affiliates, as identified in writing to CDS. The term "Data Recipient" includes (a) any Person that receives and uses Exchange Data for internal purposes only, and (b) any Person that receives and distributes Exchange Data, in each case pursuant to and in accordance with the terms and conditions of this Agreement and Exchange Requirements.

"Data Recipient Account Agreement" shall mean an agreement with an External Subscriber that (a) governs the accounts held by the External Subscriber with Data Recipient through which the External Subscriber is entitled to access Exchange Data, including any limitations on an External Subscriber's right to redistribute Exchange Data, and (b) protects CDS and the CDS Indemnified Parties to the same extent as if Data Recipient had presented and the External Subscriber had signed a Subscriber Agreement as per the applicable Exchange Requirements.

"Data Recipient Indemnified Parties" shall mean, collectively, Data Recipient and its subsidiaries, affiliates and its and their respective owners, officers, directors, employees, and agents.

"Data Recipient Invoiced Subscribers" shall mean any Data User that, per CDS' decision, are charged or assessed by Data Recipient for Exchange Data.

"Data User" shall mean any Person that receives Exchange Data from Data Recipient.

"Exchange" and **"Exchanges"** shall mean, individually or collectively, Cboe BZX Exchange, Inc., Cboe BYX Exchange, Inc., Cboe EDGA Exchange, Inc., Cboe EDGX Exchange, Inc., and Cboe FX Markets LLC.

"Exchange Data" shall mean certain data and other information disseminated relating to securities or other financial instruments, products, vehicles, currencies, or devices; or relating to Persons regulated by an Exchange or to activities of an Exchange; or gathered by CDS from other sources, in each case (other than foreign trading currency data) sourced by CDS within the U.S.

"Exchange Requirements" shall mean (a) the rules, regulations, interpretations, decisions, opinions, orders and other requirements of the Securities Exchange Commission or other regulatory authorities, as may be applicable; (b) the rules and regulations, disciplinary decisions and rule interpretations applicable to the Exchanges; (c) the Exchanges' decisions, policies, interpretations, user guides, operating procedures, specifications (including without limitation the Cboe Specifications), requirements and other documentation that is regulatory or technical in nature published on Cboe Global Markets' Website or a successor website (the "Website"); and (d) all other applicable laws, statutes, rules, regulations, orders, decisions, interpretations, opinions and other requirements.

"External Subscriber" shall mean any Data User not affiliated with Data Recipient that receives Exchange Data where Data Recipient can substantially control Exchange Data for the purpose of reporting usage or qualification.

"Internal Subscriber" shall mean any Data User affiliated with Data Recipient that receives Exchange Data where Data Recipient can substantially control Exchange Data for the purpose of reporting usage or qualification.

"Person" shall mean any individual, corporation, limited liability company, trust, joint venture, association, company, limited or general partnership, unincorporated organization, or other entity.

"Redistributor" shall mean another distributor from which Data Recipient receives Exchange Data and for which such distributor cannot substantially control the Exchange Data received by Data Recipient for purposes of reporting usage and qualification.

"Service Facilitator" shall mean a Person receiving Exchange Data from Data Recipient for the sole purpose of facilitating dissemination of Exchange Data through Data Recipient's service in accordance with the terms and conditions of this Agreement.

"Subscriber Agreement" shall mean any agreement that CDS may require Data Recipient to obtain from an External Subscriber prior to Data Recipient providing such External Subscriber with Exchange Data.

"System" shall mean the system CDS or its affiliates has developed for creation and/or dissemination of Exchange Data.

"System Description" shall mean the Cboe Global Markets Data Feed Order Form and System Description and/or Direct Edge System Description/Data Feed Request, as applicable, and any other description of Data Recipient's system for receiving, transmitting and disseminating Exchange Data that is provided to and approved by CDS.

"User Agreement" shall mean an agreement by and between Data Recipient and the Exchange, pursuant to which Data Recipient has the right to access the Exchange to, among other things, enter orders on the Exchange, receive status updates on orders, cancel orders, and execute trades against orders on the Exchange limit order book, as such agreement may be amended, modified, or supplemented from time to time.

2. Exchange Users. All rights under this Agreement granted to any Data Recipient that is also party to a User Agreement are granted subject to the terms and conditions of this Agreement and are in addition to the rights granted to Data Recipient under the User Agreement.

If Data Recipient is a member of an Exchange, then Data Recipient expressly acknowledges and agrees that (a) this Agreement does not limit or reduce in any way Data Recipient's obligations and responsibilities as a member of any applicable Exchange; (b) this Agreement does not in any way alter the procedures or standards generally applicable to

Updated October 17, 2017

disciplinary or other actions taken by CDS to enforce compliance with, or impose sanctions for violations of, applicable Exchange Requirements; and (c) the nonpayment of amounts due under this Agreement could result in the suspension or cancellation of Data Recipient's membership on an Exchange in accordance with applicable Exchange Requirements.

3. Other Recipients. If Data Recipient has not entered into a User Agreement with the Exchange, by signing this Agreement, Data Recipient has the right to access the Exchange to receive data feeds from the Exchange for internal purposes and for the distribution of, or otherwise enabling access (directly or indirectly) to, Exchange Data, as described in Data Recipient's System Description and approved by CDS and not for any purpose inconsistent with the terms of this Agreement.

4. Use of Exchange Data. CDS hereby grants to Data Recipient a worldwide, non-exclusive, non-transferable license to: (a) copy, store, process, commingle, and use any Exchange Data received (i) directly from the Exchange; (ii) through an approved extranet; (iii) through an authorized data feed provider (i.e., a Redistributor); or (iv) otherwise, and (b) distribute Exchange Data in any form by means of any current or future product or service of the Data Recipient in any media, in accordance with the terms of this Agreement and Exchange Requirements, as available on the Website and as may be amended, modified, or supplemented from time to time. Data Recipient shall ensure that the Exchange Data is clearly attributed as originating from the applicable Exchange.

Furthermore, Data Recipient represents and warrants that the detailed description of its system for receiving, transmitting and disseminating Exchange Data, as described in its System Description, including, but not limited to, the data processing equipment, software and communications facilities related thereto, is true, complete and not misleading, and that Data Recipient and Data User are authorized to receive and use the Exchange Data only for the purposes set forth in this Agreement and applicable Exchange rules and Exchange Requirements. Any use of the Exchange Data by Data Recipient and Data User, including, but not limited to, distribution or reprocessing, unless expressly described in Data Recipient's System Description and approved by CDS, is prohibited. Data Recipient acknowledges and represents that it shall not use the Exchange Data at any time in contravention of the Exchange Requirements, including, and without limitation, the restriction on the display of information as set forth in Section 603(c) of Regulation NMS.

Should Data Recipient intend to make any material change to its System Description or in Data Recipient's use of the Exchange Data (including, but not limited to, redistribution and reproduction) in any manner not then described in Data Recipient's System Description, Data Recipient may only do so with CDS' prior written approval of Data Recipient's revised System Description and subject to payment of applicable fees. CDS shall promptly and in good faith approve or disapprove proposed modifications to Data Recipient's System Description. Data Recipient acknowledges and agrees that it acts at its own risk in developing any modification to its service and/or systems prior to receiving approval from CDS in accordance with this Section 4. Data Recipient is not required to notify CDS of non-material changes to its System Description.

5. Record Retention by Data Recipient. Data Recipient shall maintain complete and accurate records relating to the receipt of Exchange Data in accordance with the Exchange Requirements and other such information as CDS from time to time may reasonably request in writing.

6. Reporting. Data Recipient shall comply with the requirements of CDS as to usage reporting as CDS requires from time to time in writing. Unless otherwise provided by CDS, Data Recipient shall use reasonable efforts to provide such reporting within 15 days of the end of the applicable reporting period set forth by CDS but CDS shall not consider such reporting to be late until 45 days after the due date.

7. Proprietary Nature of Exchange Data. CDS represents that Exchange Data and the System constitute valuable proprietary information and rights of CDS and the Exchanges. Data Recipient expressly acknowledges and agrees that, as between CDS and Data Recipient, CDS has the exclusive proprietary rights in and to the System and Exchange Data that (a) originates on or relates to trading on any of CDS' markets; (b) relates to activities that are regulated or operated by one or more of the Exchanges; (c) CDS derives from Exchange Data that originates on or relates to any of the Exchanges; and (d) is a compilation or other rights in information and data that CDS gathers from other sources pursuant to separate agreements with those sources. The System and all Exchange Data, including without limitation any and all intellectual property rights inherent therein or appurtenant thereto, shall, as between CDS and Data Recipient, be and remain the sole and exclusive property of CDS. Data Recipient shall not, by act or omission, diminish or impair in any manner the acquisition, maintenance and full enjoyment by CDS, its licensees, transferees and assignees, of the proprietary rights of CDS in Exchange Data and the System. Data Recipient acknowledges and agrees that third party information providers who provide information, goods and services to CDS in connection with the creation of Exchange Data have exclusive rights in their respective information and data. CDS makes no proprietary claim to any information derived from Exchange Data by Data Recipient.

8. Right to Deny Distribution. CDS retains the right to direct Data Recipient to terminate any external distribution of Exchange Data for any reason or no reason, in which event CDS shall notify Data Recipient and Data Recipient shall cease retransmitting Exchange Data as soon as commercially practicable.

9. Use of Name. CDS shall not: (a) advertise, publicly announce or otherwise state that it is providing services to Data Recipient or its affiliates or (b) use the name of Data Recipient or any affiliate thereof in any advertising or promotional materials, including but not limited to, any published list of data recipients or other clients in its Website displays, without the prior written consent of Data Recipient.

10. Right to Audit. During the term of this Agreement and for a period 12 months thereafter, Data Recipient shall make its premises available to CDS or its appointed agent for physical inspection of Data Recipient's use of Exchange Data (including review of any records regarding the use of, or redistribution of, the Exchange Data and locations where the Exchange Data is being received), during normal business hours, upon reasonable advance notice, to verify the accuracy of reports in accordance with Exchange Requirements and to ensure that the type and amount of fees, if any, calculated or stated to be payable to CDS are complete and accurate. While on Data Recipient's premises, CDS or its appointed designee shall comply with Data Recipient's written standard security policies and procedures to the extent made known by Data Recipient to CDS or its appointed designee. In no event will CDS or its appointed agent audit Data Recipient more than once in any 12 month period, unless necessary due to a reasonable suspicion of non-compliance with any material provision of this Agreement. Data Recipient shall comply promptly with any reasonable request from CDS for information regarding Data Recipient's receipts, usage, processing, display and redistribution of Exchange Data. The costs of such audit shall be borne by CDS unless such audit reveals an underpayment by Data Recipient of 10% or more or a material breach of the rights or licenses granted to Data Recipient under this Agreement; in such case, Data Recipient shall reimburse CDS for its costs and expenses in conducting such audit, to the extent that such costs and expenses are commensurate with industry standards.

11. Qualification Requirements; Data Recipient Indemnification. Except as otherwise set forth in this Agreement, Data Recipient shall only furnish, or cause or permit to be furnished, all or any part of Exchange Data to a Data User who, at the time of receipt thereof, is of a type qualified (as set forth in applicable Exchange Requirements) to receive Exchange Data from Data Recipient. Data Recipient agrees that CDS may have different qualification requirements for different Data Users.

Data Recipient may have an obligation to obtain an executed Subscriber Agreement from External Subscribers or cause Data Feed Subscribers to execute a Cboe Global Markets U.S. Market Data Agreement with CDS. Data Recipient shall have no obligation to obtain an executed Subscriber Agreement from External Subscribers if Data Recipient represents and warrants that it has, or will have in place before distributing Exchange Data to any External Subscriber, a legally valid and enforceable Data Recipient Account Agreement with such External Subscriber.

Data Recipient may use a Service Facilitator to facilitate the dissemination of Exchange Data in Data Recipient's service, provided that Data Recipient has a legally valid and enforceable contract with such Service Facilitator, prior to distributing any Exchange Data to any Service Facilitator, that: (a) includes all limitations on the Service Facilitator's right to redistribute Exchange Data; and (b) protects CDS and the CDS Indemnified Parties to the same extent as if the Service Facilitator had signed a Cboe Global Markets U.S. Market Data Agreement with CDS directly.

Data Recipient shall indemnify CDS, all CDS Indemnified Parties and any third parties that provide information, goods, and services to CDS in connection with the creation of Exchange Data against any assertion of claims or losses relating against the CDS Indemnified Parties made by an External Subscriber who receives Exchange Data from Data Recipient (or any Person relying upon Exchange Data received by such a Data User) arising from Data Recipient's election to distribute Exchange Data to such External Subscriber pursuant to this Section 11 rather than presenting the Subscriber Agreement to such Persons. In terms of recordkeeping and retention, Data Recipient Account Agreements shall be subject to applicable Exchange Requirements. In the event of a dispute with Data User(s) relating to Exchange Data, Data Recipient agrees to provide CDS with copies of the relevant portions of the Data Recipient Account Agreements. In the text of a Subscriber Agreement, Data Recipient may be referenced as "Vendor".

If any Data User fails to comply with any of the terms or conditions of this Agreement applicable to Data Users, its agreement with Data Recipient for Exchange Data, or any other agreement between Data User and CDS (including the Additional Agreements), or has made any representation in any such agreement which was or has become untrue, then Data Recipient shall, within 5 business days after receipt of notice from CDS of such failure or untruth, cease providing Exchange Data to such Data User and shall, within 10 business days following the receipt of such notice, confirm such cessation by notice to CDS. Data Recipient shall be solely responsible for the acts and omissions of Internal Subscribers. If a Data User is to be

terminated under this provision, then CDS will request all Data Recipients to cease providing Exchange Data to such Data User.

12. Modifications; Fees. Data Recipient acknowledges and agrees that nothing in this Agreement constitutes an undertaking by CDS to continue: (a) Exchange Data, the System, or any aspect of either, in the present form or configuration or under the current Cboe Specifications; or (b) to use existing communications facilities. CDS, in its sole discretion, may make modifications, additions, and/or deletions: (i) to Exchange Data, the System, or any aspect of either; (ii) to the Cboe Specifications; (iii) to its communications facilities; or (iv) to CDS' decisions, policies, operating procedures, requirements, and other documentation (including, but not limited to, specifications, user guides and the Additional Agreements). CDS will use commercially reasonable efforts to provide Data Recipient with at least 60 days' notice of any material modification, addition, or deletion, except to the extent a shorter period is: (x) required due to any situation that necessitates modifications, additions, or deletions on an accelerated basis or otherwise precludes such advance notice, or (y) required pursuant to an order of a court, an arbitrator or a regulatory agency.

Data Recipient agrees to make timely payment of Connectivity Fees and Data Fees, as well as any applicable late fees for the failure to make payment within the required time period. The amount of applicable Connectivity Fees and Data Fees shall be set forth in Exchange rules or posted on the Website. Connectivity Fees and Data Fees are payable within 30 days of the invoice date. Data Recipient will be solely responsible for any and all other telecommunications costs and all other expenses incurred in connecting to and maintaining its connection to, Exchange. Failure to make payments within 30 days from the invoice date may result in suspension or termination of distribution of Exchange Data by CDS to Data Recipient. Data Recipient agrees to pay CDS a late charge in the amount of 1% per month on all past due amounts that are not the subject of a legitimate and bona fide dispute. Subject to the Act, CDS reserves the right to change its fee schedule, including Connectivity Fees and Data Fees applicable to Data Recipient. CDS will use commercially reasonable efforts to provide advance notice to Data Recipient (delivered via email and posted to the Website) of any changes to Connectivity Fees. CDS will use commercially reasonable efforts to provide at least 60 days advance notice to Data Recipient (delivered via email and posted to the Website) of any changes to Data Fees, provided, however, that such notice shall be not less than 30 days prior to the effectiveness of the change. **Receipt or use of Exchange Data after the applicable notice period for any modification, addition, or deletion shall constitute acceptance of Exchange Data, Connectivity Fees, Data Fees, the System, the Cboe Specifications, or other decisions, policies, operating procedures, requirements, and other documentation as so changed.**

All Data Users shall be either Data Recipient Invoiced Subscribers or CDS Invoiced Subscribers. Data Recipient is not required to actually invoice Data Recipient Invoiced Subscribers, but, in any event, Data Recipient shall be responsible for the charges associated with the Data Recipient Invoiced Subscribers. Data Recipient shall bear all risk of non-payment by Data Recipient Invoiced Subscribers or by Data Users for whom Data Recipient is responsible for the charges. CDS will bear the risk of non-payment by CDS Invoiced Subscribers. Data Recipient shall reasonably cooperate with CDS in any lawful efforts by CDS to collect unpaid charges due CDS from current or former CDS Invoiced Subscribers. Data Recipient may choose to pay CDS any charges due on behalf of any Data User. Upon Data Recipient's payment to CDS on behalf of any Data User of any charges due hereunder, Data Recipient shall be subrogated to any and all rights of CDS to recover such charges.

In addition, for Data Recipient Invoiced Subscribers, Data Recipient shall pay any taxes, charges or assessments (other than taxes imposed on the net income of CDS) by any foreign or domestic national, state, provincial or local government bodies, or subdivisions thereof relating to the provision of Exchange Data pursuant to this Agreement, and any related penalties or interest. In addition, if Data Recipient or any Data Recipient Invoiced Subscriber is required by applicable law to deduct or withhold any such tax, charge or assessment from the amounts due CDS, then such amounts due shall be increased so that the net amount actually received by CDS after the deduction or withholding of any such tax, charge or assessment, will equal one hundred percent (100%) of the charges that are owed.

13. Term and Termination. This Agreement, subject to earlier termination in accordance with its terms, shall continue until it is terminated either by Data Recipient on not less than 30 days' written notice to CDS or by CDS on not less than 60 days' written notice to Data Recipient. Notwithstanding the foregoing, this Agreement may be terminated immediately upon written notice by CDS in the event that (a) Data Recipient is not permitted or not able to receive or CDS is prevented from disseminating Exchange Data, or any part thereof; (b) any representation, warranty or certification made by Data Recipient in this Agreement or in any other document furnished by Data Recipient is, as of the time made or furnished, materially false or misleading; (c) Data Recipient proceeds with a proposed action which would result in a default of its obligations or covenants under this Agreement or in a breach of any representation, warranty or certification, which is material to CDS for regulatory, commercial or other reasons, made by Data Recipient in connection herewith, after CDS has notified Data Recipient in writing that such proposed action would constitute a default or breach hereunder; or (d) CDS, in its sole

reasonable discretion, determines that any failure on the part of Data Recipient to comply with this Agreement has or is likely to have a materially adverse impact on the operation or performance of the System, Exchange Data or any Exchange, or likely to cause disproportionate harm to CDS' interests should termination be delayed. The following Sections will survive the termination or expiration of this Agreement for any reason: 1, 6, 7, 9, 10, 11, 12, 13, 14, 15, 16, 17, 20, 22, 23, 24, and 26. Any terms and conditions of the Additional Agreements incorporated herein by reference which by their terms are stated to survive the termination or expiration of such Additional Agreements shall survive the termination or expiration of this Agreement.

14. Confidentiality. Under this Agreement, CDS (and any CDS designee conducting an audit pursuant to this Agreement) shall keep confidential Data Recipient's System Description and Data Recipient's records, reports and payments that CDS or its designee has reviewed or audited, and any other Data Recipient information or material reasonably considered to be of a confidential nature (whether or not designated as such), as well as any and all information received in connection with this Agreement, including but not limited to, business, financial, operational, product, service and other information. Data Recipient acknowledges that it may also obtain confidential information, data, or techniques of CDS (whether or not designated as such). All such confidential information, whether written or oral, shall be deemed confidential upon disclosure to the recipient. Except as otherwise set forth herein, the recipient shall use such confidential information solely for use consistent with the purposes of this Agreement; shall hold such confidential information in confidence; and shall not use, disclose, copy, or publish any such confidential information without the prior written approval of the disclosing party. The recipient shall take reasonable security precautions, including at least as great as the precautions it takes to protect its own confidential information, but no less than reasonable care, to keep confidential the confidential information of the disclosing party. The recipient shall notify the disclosing party immediately upon discovery of any unauthorized use or disclosure of confidential information, and will cooperate with disclosing party in every reasonable way to help disclosing party regain possession of the confidential information and prevent its further unauthorized use or disclosure. The parties acknowledge that monetary damages may not be a sufficient remedy for unauthorized disclosure of confidential information, and that disclosing party shall be entitled, without waiving any other rights or remedies, to such injunctive or equitable relief as may be deemed proper by a court of competent jurisdiction.

Notwithstanding anything herein to the contrary, CDS or Data Recipient may disclose confidential information to the extent: (a) demanded by a court, arbitrator or government agency with regulatory jurisdiction over one or more of CDS' markets or over Data Recipient or any judicial or government order; (b) necessary to fulfill any CDS or Data Recipient regulatory responsibility, including any responsibility over members and associated Persons under the Act; or (c) necessary for CDS or Data Recipient and their respective employees, directors, and other agents to use such confidential information consistent with the purposes of this Agreement. If a party is required to disclose information pursuant to clauses (a) and (b) immediately above, such party shall notify the disclosing party in writing, to the extent permitted by law or regulation, of such requirement prior to disclosing such information and provide the original disclosing party, at its expense, with an adequate opportunity to obtain a protective order or other reliable assurance that confidential treatment will be accorded to the confidential information. The duties in this Section 14 do not apply to data, information or techniques that: (i) were lawfully in a party's possession prior to the date of this Agreement, provided the source of that information was not known by recipient to be bound by a confidentiality agreement with or other continual, legal or fiduciary obligation of confidentiality to disclosing party; (ii) is now, or hereafter becomes, through no act or failure to act on the part of recipient, generally known to the public; (iii) is rightfully obtained by recipient from a third party so long as the party does not know that the third party has breached any obligation not to reveal such data, information, or techniques; or (iv) can be demonstrated was independently developed by recipient without use or reference to the confidential information. All confidential information is and shall remain the property of the disclosing party. By disclosing confidential information to recipient, disclosing party does not grant any express or implied right to recipient to or under any patents, copyrights, trademarks, or trade secret information.

CDS shall not disclose its audit findings to any third parties (other than to its directors and independent consultants or subcontractors who are subject to confidentiality obligations or as otherwise set forth herein) and all information learned in connection with an audit shall constitute Data Recipient's confidential information. Notwithstanding the foregoing, nothing herein shall prevent CDS from using the audit findings to the extent the findings are used in the aggregate with other information and such aggregation does not (a) specifically identify Data Recipient or (b) create a context where Data Recipient's identity may be reasonably inferred.

15. LIMITATION OF LIABILITY; DISCLAIMER OF WARRANTIES. Absent fraud or willful misconduct by CDS, or a claim arising out of CDS' indemnification or confidentiality obligations set forth herein, CDS, its officers, directors, shareholders, employees, agents and consultants shall not be liable to Data Recipient or its affiliates, or to any Data User or its affiliates, for any inaccurate or incomplete Exchange Data received from CDS or from a Redistributor, any delays, interruptions, errors, or omissions in the furnishing thereof, or any direct, indirect or consequential damages arising from or occasioned by said inaccuracies, delays, interruptions, errors or omissions. DATA RECIPIENT EXPRESSLY

ACKNOWLEDGES THAT EXCHANGE DATA AND ANY AND ALL MATERIAL RELATED TO EXCHANGE DATA, INCLUDING BUT NOT LIMITED TO THE SYSTEM AND CDS SPECIFICATIONS, ARE BEING PROVIDED "AS IS." DATA RECIPIENT EXPRESSLY ACKNOWLEDGES THAT CDS DOES NOT MAKE ANY REPRESENTATIONS OR WARRANTIES, EXPRESS OR IMPLIED, WITH RESPECT TO EXCHANGE DATA, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OR ANY WARRANTIES OF MERCHANTABILITY, QUALITY OR FITNESS FOR A PARTICULAR PURPOSE. ABSENT FRAUD OR WILLFUL MISCONDUCT BY CDS, ITS OFFICERS, DIRECTORS, EMPLOYEES, AGENTS AND CONSULTANTS SHALL NOT BE LIABLE TO DATA RECIPIENT, OR TO ANY RECIPIENT OF EXCHANGE DATA REDISTRIBUTED BY DATA RECIPIENT, FOR INDIRECT, CONSEQUENTIAL, EXEMPLARY, SPECIAL, INCIDENTAL OR PUNITIVE DAMAGES OF ANY NATURE, INCLUDING BUT NOT LIMITED TO, LOSS OF OR DAMAGE TO DATA, LOSS OF BUSINESS OR LOST PROFITS, ARISING FROM ANY CAUSE WHATSOEVER, EVEN IF CDS HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. ABSENT FRAUD OR WILLFUL MISCONDUCT BY DATA RECIPIENT, OR A CLAIM ARISING OUT OF DATA RECIPIENT'S INDEMNIFICATION OR CONFIDENTIALITY OBLIGATIONS SET FORTH HEREIN, DATA RECIPIENT, ITS OFFICERS, DIRECTORS, EMPLOYEES, AGENTS AND CONSULTANTS SHALL NOT BE LIABLE FOR INDIRECT, CONSEQUENTIAL, EXEMPLARY, SPECIAL, INCIDENTAL OR PUNITIVE DAMAGES OF ANY NATURE ARISING FROM ANY CAUSE WHATSOEVER, EVEN IF DATA RECIPIENT HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

16. Indemnification by Data Recipient. Absent fraud or willful misconduct by CDS or a claim arising out of CDS' indemnification or confidentiality obligations set forth herein, Data Recipient and its affiliates agree to indemnify and hold harmless CDS Indemnified Parties from and against any and all Claims and Losses imposed on or asserted against CDS Indemnified Parties by a third party resulting from, in connection with, or arising out of (a) any failure of Data User to comply with the terms and conditions of any CDS required agreement for Exchange Data if Data Recipient has failed to notify CDS in writing of such non-compliance within 10 days after Data Recipient knows of such non-compliance (unless such Data User is a party to a Cboe Global Markets U.S. Market Data Agreement); (b) any assertion of Claims and Losses relating to this Agreement against any CDS Indemnified Party made by any Data User (or any third party relying upon Exchange Data received by such Data User, unless such Data User is party to a Cboe Global Markets U.S. Market Data Agreement); (c) the receipt, use, or redistribution of Exchange Data in breach hereof by Data Recipient or its affiliates; and (d) any failure by Data Recipient or its affiliates to comply with its obligations under this Agreement; provided that: (i) CDS promptly notifies Data Recipient in writing of any claim, action, or allegation; however, failure to promptly notify Data Recipient of a claim shall not relieve Data Recipient of its indemnification obligations hereunder except to the extent that such failure prejudices the rights of Data Recipient; (ii) Data Recipient shall have sole control of the settlement and defense of any action to which this indemnity relates, but, upon CDS's request, shall inform CDS of the status of any proceedings or negotiations; and (iii) CDS reasonably cooperates to facilitate such defense. Data Recipient, in defending any such claim, action or allegation, except with the written consent of CDS Indemnified Parties, shall not consent to entry of any judgment or enter into any settlement which (A) does not include, as an unconditional term, the grant by the claimant to the CDS Indemnified Parties of a release of all liabilities in respect to such claim, action, or allegation and (B) subjects CDS Indemnified Parties to any obligation in addition to those set forth herein.

17. Indemnification by CDS. CDS agrees to indemnify, defend and hold harmless Data Recipient Indemnified Parties from and against all Claims and Losses imposed on or asserted against a Data Recipient Indemnified Party by a third party resulting from, in connection with, or arising out of a claim that Exchange Data, or Data Recipient's use thereof, or the System infringes any copyright, patent, trademark, trade secret or other intellectual property right; provided that: (a) Data Recipient promptly notifies CDS in writing of any claim, action, or allegation; however, failure to promptly notify CDS of a claim shall not relieve CDS of its indemnification obligations hereunder except to the extent that such failure prejudices the rights of CDS; (b) CDS shall have sole control of the settlement and defense of any action to which this indemnity relates, but, upon Data Recipient's request, shall inform Data Recipient of the status of any proceedings or negotiations; and (c) Data Recipient reasonably cooperates to facilitate such defense. CDS, in defending any such claim, action or allegation, except with the written consent of Data Recipient Indemnified Parties, shall not consent to entry of any judgment or enter into any settlement which (A) does not include, as an unconditional term, the grant by the claimant to the Data Recipient Indemnified Parties of a release of all liabilities in respect to such claim, action, or allegation and (B) subjects Data Recipient Indemnified Parties to any obligation in addition to those set forth herein.

CDS shall not have the obligation to indemnify, defend and hold harmless Data Recipient's Indemnified Parties for any and all Claims and Losses imposed on, incurred by or asserted against a Data Recipient Indemnified Party as a result of any allegation of infringement or misappropriation if the System, Exchange Data, or any Cboe Specifications have not been used in accordance with this Agreement which resulted in such infringement or misappropriation, or if Data Recipient uses the System, Exchange Data, or any Cboe Specifications after CDS notifies Data Recipient of a potential or actual infringement claim or to the extent it is based on use of a superseded version of the System, Exchange Data, or any Cboe Specifications if such infringement or misappropriation would have been avoided by use of the current version of the System,

Exchange Data, or Cboe Specifications or if the infringement or misappropriation claim, action, or allegation is the result of the combination, operation, or use of the System furnished timely to Data Recipient by CDS, Exchange Data, or any Cboe Specifications with hardware, software, or materials if such infringement or misappropriation would have been avoided by the use of the System, Exchange Data, or any Cboe Specifications without such hardware, software, or materials.

In the event of a claim, action or allegation of infringement or misappropriation or if, in CDS' reasonable opinion, such a claim, action or allegation is likely to occur or if the use of the System, Exchange Data, or any Cboe Specifications is enjoined because of infringement or misappropriation, CDS may, at its sole option and expense, (i) procure for Data Recipient the right to continue using the System, Exchange Data, or any Cboe Specifications; (ii) replace or modify the System, Exchange Data, or any Cboe Specifications to be non-infringing, and require the return of the potentially infringing or misappropriating items, if applicable, without liability to Data Recipient or any other third party; or (iii) terminate this Agreement immediately without liability to Data Recipient (other than indemnification by CDS in accordance with this Section) or any third party.

This Section sets forth the entire liability of CDS and the exclusive remedy of Data Recipient for the infringement or misappropriation of intellectual property by CDS.

18. Assignment. This Agreement shall inure to the benefit of and shall be binding upon the parties hereto and their respective permitted successors and assigns. Data Recipient may not assign this Agreement without the prior written consent of CDS; provided, however, that CDS shall not unreasonably withhold such consent. Notwithstanding the foregoing, Data Recipient may assign this Agreement to (a) an affiliate or subsidiary; (b) a successor of Data Recipient, by consolidation, merger, or operation of law; or (c) a purchase of all or substantially all of Data Recipient's assets, in each case without the prior written consent of CDS, provided that Data Recipient (a) is not currently in breach of this Agreement or delinquent in any fees owed to CDS hereunder and (b) provides prior written notice to CDS. CDS may, as permitted by the Act, assign or transfer this Agreement or any of its rights or obligations hereunder to a related or an unrelated party upon prior written notice to Data Recipient.

19. Force Majeure. Neither party to this Agreement will be liable for delay or failure to perform its obligations hereunder (other than a failure to pay amounts when due) caused by an event that is beyond the party's control; provided, however, that such party will not have contributed in any way to such event.

20. Severability. Each provision of this Agreement will be deemed to be effective and valid under applicable law, but if any provision of this Agreement is determined to be invalid, void, or unenforceable under any law, rule, administrative order or judicial decision, that determination will not affect the validity of the remaining provisions of this Agreement, and such provision shall be construed to be effective and valid to the fullest extent under applicable law.

21. Relationship of the Parties. Nothing herein shall be construed to create a joint venture or partnership between the parties hereto. Neither party hereto shall have any express or implied right or authority to assume or create any obligations on behalf of or in the name of the other party or to bind the other party to any contract, agreement, or undertaking with any third party.

22. Entire Agreement; Priority Rules; Amendment; Waiver. Notwithstanding anything in this Agreement to the contrary, the terms and conditions of any applicable Additional Agreements entered into by Data Recipient with the Exchange shall be incorporated herein by reference, and, together with this Agreement, shall constitute the complete and entire statement of all conditions and representations of the agreement between CDS and Data Recipient with respect to its subject matter and supersedes all prior writings or understandings, including, without limitation, any Exchange Data Vendor Agreement entered into with the Exchanges. If there is any conflict or inconsistency between this Agreement and any of the Additional Agreements with respect to the receipt or use of Exchange Data as contemplated herein, the following order of precedence shall apply, to the extent applicable to Data Recipient: (a) the Price List or Fee Schedule; (b) the Cboe Global Markets Data Feed Order Form and System Description, the Cboe FX Data Feed Order Form and System Description and/or the Direct Edge System Description/Data Feed Request, as applicable; (c) this Agreement; (d) the User Agreement; and (e) any additional terms and conditions, policies or agreements entered into by Data Recipient with CDS or any of its affiliates relating to the subject matter hereof.

Except as may otherwise be set forth in this Agreement, CDS may alter any term or condition of this Agreement or the Subscriber Agreement on 60 days' prior written notice to Data Recipient, and any receipt or use of Exchange Data after such date is deemed acceptance of the new term or condition. The means of notifying Data Recipient of such new term or condition may include, but not be limited to, emailing such term or condition to Data Recipient or posting such alteration on the Website or a successor site upon written notice to Data Recipient. No failure on the part of CDS or Data Recipient to

exercise, no delay in exercising, and no course of dealing with respect to any right, power, or privilege under the Agreement shall operate as a waiver thereof, nor shall any single or partial exercise of any such right, power, or privilege preclude any other or further exercise thereof or the exercise of any other right, power, or privilege under this Agreement.

23. Governing Law; Venue. This Agreement will be governed by and interpreted in accordance with the laws of the State of New York without giving effect to any choice or conflict of law provision or rule. Both parties submit to the jurisdiction of the state and federal courts in and for the State of New York for the resolution of any dispute arising under this Agreement.

24. Affiliates. Notwithstanding anything to the contrary in this Agreement, any affiliate of the Data Recipient is entitled to exercise the rights of Data Recipient set forth herein on behalf of itself, the Data Recipient, or any other affiliate of the Data Recipient, including, but not limited to, rights to use and distribute Exchange Data to other parties, subject to the terms of this Agreement. If this Agreement will be applicable to an affiliate, Data Recipient must submit a list of any such affiliate(s) to CDS. By submitting the names of its affiliate(s), Data Recipient agrees that the contact information set forth herein shall be deemed to be the contact information for each affiliate and that DATA RECIPIENT SHALL ASSUME ALL RESPONSIBILITY FOR AND WILL HOLD HARMLESS AND INDEMNIFY CDS AGAINST ANY ACTION OR INACTION BY AN AFFILIATE AS IF SUCH ACTION OR INACTION WERE THAT OF DATA RECIPIENT, AND DATA RECIPIENT AND ITS AFFILIATE(S) SHALL BE JOINTLY AND SEVERALLY LIABLE FOR ALL ACTIONS AND/OR INACTIONS OF THE OTHER(S). All of the rights and licenses granted to, and all obligations of, Data Recipient under this Agreement will apply to such affiliate(s) to the same extent as applicable to Data Recipient.

For purposes of this Agreement, an "affiliate" of Data Recipient shall include any entity that, from time to time, directly or indirectly Controls, is Controlled by, or is under common Control with Data Recipient. "Control" means the power to direct or cause the direction of the management or policies of another entity, whether through the ownership of voting securities, by contract, or otherwise. The Data Recipient may delegate any of its responsibilities, obligations or duties under or in connection with this Agreement to any affiliate of the Data Recipient or an authorized third party agent, which may discharge those responsibilities, obligations or duties on behalf of the Data Recipient in accordance with this Agreement.

25. Headings. Section headings are included for convenience only and are not to be used to construe or interpret this Agreement. All references contained herein to sections or subsections shall refer to the sections or subsections of this Agreement, unless specific reference is made to the sections or subsections of another document.

26. Cumulative Remedies. Except as otherwise limited herein, all rights and remedies provided in this Agreement are cumulative and not exclusive, and the exercise by either party of any right or remedy does not preclude the exercise of any other rights or remedies that may now or subsequently be available at law, equity, by statute, in any other agreement between the parties (including without limitation the Additional Agreements) or otherwise.

27. Counterparts. This Agreement may be executed in one or more counterparts, which shall each be considered an original but all of which shall constitute one and the same Agreement.

[Remainder of page intentionally left blank. Signature page follows.]

IN WITNESS WHEREOF the parties hereto have caused this Agreement to be executed by their duly authorized officers.

Data Recipient: _____

Cboe Data Services, LLC, on behalf of itself and its affiliates

Signature: _____

Signature: _____

Printed Name: _____

Printed Name: _____

Title: _____

Title: _____

Date: _____

Cboe Global Markets

Data Feed Order Form and System Description

☐ Initial Form
 ☐ Amended Form
 ☐ Add/Remove Data Feed Subscription

DATA RECIPIENT INFORMATION			
Company Name:		Date:	
Address of Principal Office:			
City:	State:	Zip Code:	
BILLING ADDRESS			
Address of Billing Office:			
City:	State:	Zip Code:	
BUSINESS CONTACT		BILLING CONTACT*	
Name:		Name:	
Title:		Title:	
Email:		Email:	
Phone:	Fax:	Phone:	Fax:
MARKET DATA ADMINISTRATOR**		TECHNICAL CONTACT	
Name:		Name:	
Title:		Title:	
Email:		Email:	
Phone:	Fax:	Phone:	Fax:

*The Billing Contact will be assigned a web log-in to manage the Data Recipient's monthly invoices via the Website.

**The Market Data Administrator will be assigned a web log-in to manage the Data Recipient's monthly usage reporting.

How will you receive Cboe data?

☐ Directly from Cboe or via an Extranet (complete Connectivity Section A)
☐ Through one or more Market Data Vendors (complete Connectivity Section B)
☐ Both (complete Connectivity Sections A and B)

CONNECTIVITY – SECTION A	
BZX/BYX/EDGX/EDGA Data Center Location: <input type="checkbox"/> Primary – Secaucus <input type="checkbox"/> Secondary – Chicago <input type="checkbox"/> PoP - Weehawken	
Connection Type: <input type="checkbox"/> New <input type="checkbox"/> Existing <input type="checkbox"/> Direct Connection (Co-Lo / Long Haul) <input type="checkbox"/> 1G <input type="checkbox"/> 10G <input type="checkbox"/> Other: _____ Protocol <input type="checkbox"/> Multicast <input type="checkbox"/> TCP <input type="checkbox"/> Extranet <div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> NYSE (SFTI) <input type="checkbox"/> TMX Atrium </div> <div> <input type="checkbox"/> CenturyLink <input type="checkbox"/> Other: _____ </div> </div>	
CONNECTIVITY – SECTION B	
Please identify all Vendors through which you will receive Cboe Market Data:	

DATA FEED SUBSCRIPTION / CHANGE REQUEST

Cboe BZX Exchange, Inc. (BZX)

Data Feed (Protocol)	Add	Remove	Digital Media License***	Enterprise License***	Real-Time	Historical	Effective Date
BZX Depth (Multicast / TCP)	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	
BZX Top (TCP / API)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
BZX Last Sale (TCP)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
BZX Book Viewer (API)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
BZX Summary Depth (Multicast)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
BZX Options Depth (Multicast)	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	

Cboe BYX Exchange, Inc. (BYX)

Data Feed	Add	Remove	Digital Media License	Enterprise License	Real-Time	Historical	Effective Date
BYX Depth	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	
BYX Top	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
BYX Last Sale	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
BYX Book Viewer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
BYX Summary Depth	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Cboe EDGX Exchange, Inc. (EDGX)

Data Feed	Add	Remove	Digital Media License	Enterprise License	Real-Time	Historical	Effective Date
EDGX Depth	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	
EDGX Depth Attributed	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>		
EDGX Top	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
EDGX Last Sale	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
EDGX Book Viewer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
EDGX Summary Depth	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
EDGX Options Depth	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	

Cboe EDGA Exchange, Inc. (EDGA)

Data Feed	Add	Remove	Digital Media License	Enterprise License	Real-Time	Historical	Effective Date
EDGA Depth	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	
EDGA Top	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
EDGA Last Sale	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
EDGA Book Viewer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
EDGA Summary Depth	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Aggregated Feeds

Data Feed	Add	Remove	Digital Media License	Enterprise License	Real-Time	Historical	Effective Date
Cboe One Summary (Multicast / TCP)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Cboe One Premium (Multicast / TCP)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Cboe ETF Implied Liquidity (TCP)	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	

***Digital Media and Enterprise Licenses apply only to Exchange Top, Last Sale, Book Viewer, Summary Depth, and Cboe One.

SYSTEM DESCRIPTION

Please provide a complete description of the system that makes use of Cboe data, including the system name.

Name / Version of Data System:

Name/Version of Entitlement System

Please provide a description of the system that make use of the Data, and/or the Entitlement System:

Will your organization use Cboe data internally? ☐ Yes ☐ No

Will your organization distribute Cboe data to Affiliates****? ☐ Yes ☐ No

If yes, please complete the Cboe Global Markets List of Affiliates.

**** "Affiliate" shall mean any entity that, from time to time, directly or indirectly, Controls, is Controlled by, or is under common Control with such party. "Control" means the power to direct or cause the direction of the management of policies of another entity, whether through the ownership of voting securities, by contract, or otherwise.

Will your organization distribute Cboe data externally? ☐ Yes ☐ No

If yes, is the data distribution ☐ Controlled ☐ Uncontrolled or ☐ Both

Please provide information for all Data Recipients receiving uncontrolled Cboe data from your organization.

DATA USER INFORMATION

Company Name:		Date:	
Address of Principal Office:			
City:		State:	Zip Code:
BUSINESS CONTACT		TECHNICAL CONTACT	
Name:		Name:	
Title:		Title:	
Email:		Email:	
Phone:	Fax:		Fax:

DATA USER INFORMATION

Company Name:		Date:	
Address of Principal Office:			
City:		State:	Zip Code:
BUSINESS CONTACT		TECHNICAL CONTACT	
Name:		Name:	
Title:		Title:	
Email:		Email:	
Phone:	Fax:		Fax:

DATA FROM OPTIONS PRICING REPORTING AUTHORITY (OPRA)

Dissemination of Cboe Options data is limited to parties who have equivalent access to Consolidated Options Information disseminated by OPRA for the same classes or series of options that are included in the Proprietary Information. Access to consolidated Options Information and access to Proprietary Information are deemed "equivalent" if both kinds of information are equally accessible.

Indicate whether you currently receive data from OPRA: ☐ Yes ☐ No

If yes, please indicate which vendor provides your OPRA data: _____

ADDITIONAL DATA FEEDS

HISTORICAL DATA

Data Recipients can subscribe to Cboe Historical Depth of Book, Top of Book, and Last Sale data on a T+1 basis. Up to three months of data is available via download from the Website. Additional data can be uploaded to a 1TB hard drive for a single fee per drive.

A web login account is required to subscribe to these Historical Data products. For assistance, please visit http://www.bats.com/us/equities/market_data_products/ or contact Cboe Market Data Services at 212.378.8821 or marketdata@cboe.com.

OTHER DATA FEEDS

The Cboe Auction Feeds will continue to be provided to Data Recipients upon request. To request a subscription, please contact Cboe Market Data Services at 212.378.8821 or marketdata@cboe.com.

I certify that the information provided within the System Description is accurate.

Signature of Data Recipient Authorized
Representative

Title

Printed Name

Date

Cboe Global Markets

List of Affiliates

This List of Affiliates is for the Cboe Global Markets U.S. Market Data Agreement.

"Affiliate" shall mean any entity that, from time to time, directly or indirectly, Controls, is Controlled by, or is under common Control with such party. **"Control"** means the power to direct or cause the direction of the management of policies of another entity, whether through the ownership of voting securities, by contract, or otherwise.

By submitting the names of its Affiliate(s), Data Recipient agrees that the contact information set forth herein shall be deemed to be the contact information for each Affiliate, as may be modified by Data Recipient from time to time, and that DATA RECIPIENT SHALL ASSUME ALL RESPONSIBILITY FOR AND WILL HOLD HARMLESS AND INDEMNIFY CBOE DATA SERVICES, LLC AND ITS AFFILIATES AGAINST ANY ACTION OR INACTION BY AN AFFILIATE OF DATA RECIPIENT AS IF SUCH ACTION OR INACTION WERE THAT OF DATA RECIPIENT, AND, DATA RECIPIENT AND ITS AFFILIATE(S) SHALL BE JOINTLY AND SEVERALLY LIABLE FOR ALL ACTIONS AND/OR INACTIONS OF THE OTHER(S).

Data Recipient may regard changes to the table below as accepted by CDS unless CDS notifies Data Recipient of an objection within 30 days of receipt of notification of the change.

NAME OF AFFILIATE	REGISTERED ADDRESS

**Attach additional page(s) as necessary.*

I certify that the information provided on this List of Affiliates is complete and accurate.

Data Recipient Name

Signature of Data Recipient Authorized Representative

Title

Printed Name

Date

Cboe Global Markets Subscriber Agreement

Vendor may not modify or waive any term of this Agreement. Any attempt to modify this Agreement, except by Cboe Data Services, LLC or its affiliates (collectively, "CDS"), is void.

This Cboe Global Markets Subscriber Agreement (this "Agreement"), with an effective date as of the last date executed on the signature page hereof, is made by and between the vendor referenced below ("Vendor") and the subscriber referenced below ("Subscriber").

1. Definitions. Capitalized terms used herein shall have the meanings set forth in this Section 1.

"Claims or Losses" shall mean any and all liabilities, obligations, losses, damages, penalties, claims, actions, suits, costs, judgments, settlements and expenses of any nature, whether incurred by or issued against an indemnified party or a third-party, including, without limitation, (a) indirect, special, punitive, consequential or incidental loss or damage, and (b) administrative costs, investigatory costs, litigation costs and auditors' and attorneys' fees and expenses (including in-house personnel).

"Exchange Data" shall mean certain data and other information relating to securities or other financial instruments, products, vehicles or devices; or relating to Persons regulated by CDS or to activities of CDS; or gathered by CDS from other sources.

"Non-Professional Subscriber" shall mean any natural person who is not: (a) registered or qualified in any capacity with the SEC, the Commodities Futures Trading Commission, any state securities agency, any securities exchange or association, or any commodities or futures contract market or association; (b) engaged as an "investment advisor" as that term is defined in Section 202(a)(11) of the Investment Advisors Act of 1940 (whether or not registered or qualified under that Act); or (c) employed by a bank or other organization exempt from registration under federal or state securities laws to perform functions that would require registration or qualification if such functions were performed for an organization not so exempt.

"Person" shall mean any individual, corporation, limited liability company, trust, joint venture, association, company, limited or general partnership, unincorporated organization, or other entity.

"Professional Subscriber" shall mean all other Persons who do not meet the definition of Non-Professional Subscriber.

"SEC" shall mean the U.S. Securities and Exchange Commission.

"Subscriber" shall mean, collectively, all Non-Professional Subscribers and Professional Subscribers.

"Vendor" shall mean "Data Recipient," as that term is defined in the Cboe Global Markets U.S. Market Data Agreement, as may be modified from time to time.

"Vendor's Service" shall mean the service from a Vendor, including the data processing equipment, software, and communications facilities related thereto, for receiving, processing, transmitting, using, and disseminating Exchange Data to or by Subscriber.

2. Use of Data. Subscriber may not sell, lease, furnish or otherwise permit or provide access to Exchange Data to any other Person or to any other office or place. Subscriber will not engage in the operation of any illegal business use or permit anyone else to use Exchange Data, or any part thereof, for any illegal purpose or violation of any CDS or SEC rule or regulation. Subscriber may not present Exchange Data rendered in any unfair, misleading, or discriminatory format. Subscriber shall take reasonable security precautions to prevent unauthorized Persons from gaining access to Exchange Data.

Use by Non-Professional Subscribers. Exchange Data is licensed only for personal use by a Non-Professional Subscriber. By representing to Vendor that Subscriber is a Non-Professional Subscriber, or by continuing to receive Exchange Data at a Non-Professional Subscriber rate, Subscriber is affirming to Vendor and CDS that Subscriber meets the definition of Non-Professional Subscriber as set forth herein. A Non-Professional Subscriber shall comply promptly with

any reasonable request from CDS, or its designee, for information regarding the Non-Professional Subscriber's receipt, processing, display, use, and redistribution of Exchange Data.

Use by Professional Subscribers. Exchange Data is licensed for internal business use and/or personal use by a Professional Subscriber. Professional Subscriber may, on a non-continuous basis, furnish limited amounts of Exchange Data to customers in written advertisements, correspondence, or other literature during voice telephonic conversations not entailing computerized voice, automated information inquiry systems, or similar technologies. Professional Subscriber shall make its premises available to CDS, or its designee, for physical inspection of Vendor's Service and of Professional Subscriber's use of Exchange Data (including review of any records regarding use of or access to Exchange Data and the number and locations of all devices that receive Exchange Data), all at reasonable times and upon reasonable notice, to ensure compliance with this Agreement.

3. Proprietary Data. CDS grants to Subscriber a non-exclusive, non-transferable license during the term of the Agreement to receive Exchange Data distributed to it by Vendor and, thereafter, to use such Exchange Data as permitted under the terms of this Agreement and all applicable laws, statutes, rules, and regulations of CDS and the SEC, including but not limited to, CDS' rule filings, CDS' decisions and interpretations and any specifications or successors of such laws, statutes, rules, and regulations. Subscriber acknowledges and agrees that CDS and its affiliates have proprietary rights to Exchange Data that originates on or is derived from markets regulated or operated by CDS and compilation or other rights to Exchange Data gathered from other sources. Subscriber further acknowledges and agrees that CDS' third-party information providers have exclusive proprietary rights to their respective information. In the event of any misappropriation or misuse by Subscriber or anyone who accesses Exchange Data through Subscriber, CDS or its third-party information providers shall have the right to obtain injunctive relief for its respective materials. Subscriber shall attribute the source of Exchange Data as appropriate under all circumstances.

4. Payment. Subscriber shall assume full and complete responsibility for the payment of any taxes, charges, or assessments imposed on Subscriber or CDS (except for U.S. federal, state, or local incomes taxes, if any, imposed on CDS) by any foreign or domestic national, state, provincial, or local governmental bodies, or subdivisions thereof, and any penalties or interest relating to the provision of Exchange Data to Subscriber. Interest shall be due from the date of the invoice to the time that the amounts that are due have been paid. To the extent permitted by applicable law, Subscriber acknowledges and agrees that the termination of Vendor's Services for failure to make payments shall not be considered an improper limitation of access by CDS. For Professional Subscribers, if any payment is due directly to CDS under this Agreement, payment in full is due CDS in immediately available funds within 30 days of the date of an invoice, whether or not use is made of, or access it made to, Exchange Data. Subscriber agrees to pay CDS a late charge in the amount of 1% per month on all past due amounts that are not the subject of a legitimate and bona fide dispute.

5. System. Subscriber acknowledges that CDS, in its sole discretion, may from time to time make modifications to its system or Exchange Data. Such modifications may require corresponding changes to be made to Vendor's Service. Changes or the failure to make timely changes by Vendor may sever, delay, or otherwise affect Subscriber's access to or use of Exchange Data. CDS shall not be responsible for any such effects. CDS does not endorse or approve any Vendor, Vendor's Service or equipment utilized by Vendor or Subscriber.

6. Limitation of Liability.

CDS, its officers, directors, shareholders, employees, agents and consultants shall not be liable to Subscriber or to any other Person for any inaccurate or incomplete Exchange Data received from CDS or from Vendor, any delays, interruptions, errors, or omissions in the furnishing thereof, or any direct, indirect or consequential damages arising from or occasioned by said inaccuracies, delays, interruptions, errors or omissions.

This Section shall not relieve CDS, Vendor, Subscriber, or any other Person from liability for damages that result from their own gross negligence or willful tortious misconduct or from personal injury or wrongful death claims.

CDS, Vendor, and Subscriber understand and agree that the terms of this Section reflect a reasonable allocation of risk and limitation of liability.

7. Disclaimer of Warranties. SUBSCRIBER EXPRESSLY ACKNOWLEDGES THAT CDS AND ITS THIRD-PARTY INFORMATION PROVIDERS DO NOT MAKE ANY REPRESENTATIONS OR WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OR ANY WARRANTIES OF MERCHANTABILITY, QUALITY OR FITNESS FOR A PARTICULAR PURPOSE.

8. Third-Party Information Providers' Limitation of Liability. CDS' third-party information providers shall have no liability for any damages, whether direct or indirect, whether lost profits, indirect, special, or consequential damages of Subscriber or any other Person seeking relief through Subscriber relating to the accuracy of or delays or omissions in any Exchange Data provided by CDS's third-party information providers, even if the third-party information providers have been advised of the possibility of such damages. In no event will the liability of the third-party information providers or their affiliates to Subscriber or any other Person seeking relief through Subscriber pursuant to any cause of action, whether in contract, tort, or otherwise, exceed the fee paid by Subscriber or any other Person seeking relief through Subscriber, as applicable.

9. Claims and Losses. Subscriber agrees to indemnify and hold harmless CDS, its owners, subsidiaries, affiliates, officers, directors, employees, agents, and any related Persons from any and all Claims or Losses imposed on, incurred by, or asserted as a result of or relating to: (a) any noncompliance by Subscriber with the terms and conditions hereof; and (b) any third-party actions related to Subscriber's receipt and use of Exchange Data, whether authorized or unauthorized under this Agreement. Each party agrees to indemnify and hold harmless (and in every case, CDS shall be permitted to solely defend and settle) another party (including CDS) and their owners, subsidiaries, affiliates, officers, directors, employees, agents, and any related Persons, against any Claims or Losses arising from, involving, or relating to a claim of infringement or other violation of an intellectual property right by the indemnifying party provided that: (a) the indemnified party promptly notifies the indemnifying party in writing of the Claims or Losses; and (b) the indemnified party reasonably cooperates in the defense of the Claims or Losses.

10. Termination. Subscriber acknowledges that CDS, when required to do so in fulfillment of statutory obligations or otherwise, may by notice to Vendor unilaterally limit or terminate the right of any or all Persons to receive or use Exchange Data, or any part thereof, and that Vendor shall immediately comply with any such notice and terminate or limit the furnishing of Exchange Data and confirm such compliance by written notice to CDS. Any affected Person will have available to it such procedural protections as are provided by the Securities Exchange Act of 1934 (the "Act") and applicable rules and regulations thereunder. In addition to the termination rights permitted under any agreement Subscriber may have with Vendor, this Agreement may be terminated by Subscriber upon 30 days' written notice to Vendor and by CDS upon 30 days' written notice either to Vendor or Subscriber. In the event of Subscriber's breach, the discovery of the untruth of any representation or warranty of Subscriber, or where directed by the SEC in its regulatory authority, CDS may terminate this Agreement upon not less than 3 days' written notice to Subscriber provided either by CDS or Vendor.

11. Notices. All communications required to be given in writing to CDS under this Agreement shall be directed to:

Cboe Data Services, LLC
17 State Street, 31st Floor
New York, NY 10004
Attention: Market Data Services
Email: marketdata@cboe.com

With a copy to: legalnotices@cboe.com

Direct communication to Subscriber at the last address known to Vendor shall be considered given (a) upon actual receipt if delivered by email, or (b) upon posting the notice or other communication on www.bats.com or a successor site. Subscriber promptly shall give written notice to Vendor of any change in the name or place of residence or business at which Exchange Data is received.

12. Assignment. This Agreement shall inure to the benefit of and shall be binding upon the parties hereto and their respective permitted successors and assigns. Neither Vendor nor Subscriber shall assign this Agreement (including by operation of law) without the prior written consent of CDS, provided, however, that CDS shall not unreasonably withhold such consent. Notwithstanding the foregoing, Vendor or Subscriber may assign this Agreement to an affiliate or subsidiary without the prior written consent of CDS, provided that the assigning party is not currently in breach of this Agreement or delinquent in any fees owed to CDS. CDS may, as permitted by the Act, assign or transfer this Agreement or any of its rights or obligations hereunder to a related or unrelated party upon notice to Vendor and Subscriber.

13. Severability. Each provision of this Agreement will be deemed to be effective and valid under applicable law, but if any provision of this Agreement is determined to be invalid, void, or unenforceable under any law, rule, administrative order or judicial decision, that determination will not affect the validity of the remaining provisions of this Agreement.

14. Entire Agreement; Amendment; Waiver. This Agreement constitutes the complete and entire agreement of the parties to this Agreement with respect to its subject matter and supersedes all prior writings or understandings. If there is any conflict and/or inconsistency between this Agreement and Vendor's agreement with Subscriber, the terms of this Agreement shall prevail as between CDS and Subscriber. CDS may modify any term of this Agreement upon 60 days' written notice either to Vendor or Subscriber, and any use of Exchange Data after such date shall be deemed acceptance of the new term or condition. No failure on the part of CDS or Subscriber to exercise, no delay in exercising, and no course of dealing with respect to any right, power, or privilege under the Agreement shall operate as a waiver thereof, nor shall any single or partial exercise of any such right, power, or privilege preclude any other or further exercise thereof or the exercise of any other right, power, or privilege under this Agreement.

15. Governing Law; Venue. This Agreement will be governed by and interpreted in accordance with the internal laws of the State of New York, USA. Subscriber hereby submits to the jurisdiction of the state and federal courts in and for the State of New York, USA for the resolution of any dispute arising under this Agreement.

16. Headings. Section headings are included for convenience only and are not to be used to construe or interpret this Agreement. All references contained herein to sections or subsections shall refer to the sections or subsections of this Agreement, unless specific reference is made to the sections or subsections of another document.

17. Third-Party Beneficiary. Vendor and Subscriber hereby designate CDS as a third-party beneficiary of this Agreement, having the right to enforce any provision herein.

18. Cumulative Remedies. Except as otherwise limited herein, all rights and remedies provided in this Agreement are cumulative and not exclusive, and the exercise by either party of any right or remedy does not preclude the exercise of any other rights or remedies that may now or subsequently be available at law, equity, by statute, in any other agreement between the parties (including without limitation the Additional Agreements) or otherwise.

19. Counterparts. This Agreement may be executed in one or more counterparts, which shall each be considered an original but all of which shall constitute one and the same Agreement.

[Remainder of page intentionally left blank. Signature page follows.]

IN WITNESS WHEREOF the parties hereto have caused this Agreement to be executed by their duly authorized officers.

To execute this Agreement, you must be 18 years of age and you must designate yourself as either a Non-Professional Subscriber or Professional Subscriber (see Section 2 above).

Subscriber Type: ☐ Individual – Complete Section A.
☐ Firm or Organization – Complete Section B.

A. Individual Subscriber Information

Subscriber Name: _____

Signature: _____

Date: _____

Subscriber Status: ☐ Professional ☐ Non-Professional*

**To qualify as a Non-Professional Subscriber, you must meet all of the terms set forth in Section 2 of the Agreement.*

B. Organizational Subscriber Information

Subscriber Organization Name: _____

Representative Name: _____

Title: _____

Signature: _____

Date: _____

**The Representative must be authorized in writing by the organization or firm to execute the Agreement. CDS may request documentation evidencing this authority.*

Vendor Information (for Vendor or Data Provider Use Only)

Vendor Name: _____

Representative Name: _____

Title: _____

Signature: _____

Date: _____

**The Representative must be authorized in writing by Vendor to execute the Agreement. CDS may request documentation evidencing this authority.*

Cboe Global Markets Service Facilitator List

This Service Facilitator List is for the Cboe Global Markets Data Agreement.

DATA RECIPIENT INFORMATION		
Company Name:	Date:	
SERVICE FACILITATOR INFORMATION		
Company Name:	Date:	
Address of Receipt of Exchange Data:		
City:	State:	Zip:
BUSINESS CONTACT		
Name:	Email:	
Title:	Phone:	
Description of service provided:		
DATA DISTRIBUTION: <input type="checkbox"/> Controlled <input type="checkbox"/> Uncontrolled		
Will the Service Facilitator be responsible for reporting data feed usage on behalf of the Data Recipient? <input type="checkbox"/> Yes <input type="checkbox"/> No		

SERVICE FACILITATOR INFORMATION		
Company Name:	Date:	
Address of Receipt of Exchange Data:		
City:	State:	Zip:
BUSINESS CONTACT		
Name:	Email:	
Title:	Phone:	
Description of service provided:		
DATA DISTRIBUTION: <input type="checkbox"/> Controlled <input type="checkbox"/> Uncontrolled		
Will the Service Facilitator be responsible for reporting data feed usage on behalf of the Data Recipient? <input type="checkbox"/> Yes <input type="checkbox"/> No		

**Attach Additional pages(s) as necessary*

I certify that the information provided on this Service Facilitator List is complete and accurate.

Data Recipient Name

Signature of Data Recipient Authorized Representative

Title

Printed Name

Date

Cboe Global Markets

External Controlled Data Distributor Trial Addendum

This Cboe Global Markets External Controlled Data Distributor Trial Addendum (this "Addendum") amends and supplements the Cboe Global Markets U.S. Market Data Agreement (including any amendments thereto, the "Data Agreement") entered into between Cboe Data Services, LLC, a Delaware limited liability company ("CDS"), and the External Controlled Data Distributor referenced below ("ECDD"). Capitalized terms used and not defined in this Addendum shall have the respective meanings set forth in the Data Agreement.

A. ECDD qualifies as an External Controlled Data Distributor, as specified in the Cboe Global Markets U.S. Market Data Policies (as may be amended by CDS in its discretion from time to time, the "Policies").

B. ECDD desires to offer Exchange Data to Data Users on a trial basis.

C. CDS is willing to permit such distribution of Exchange Data to Data Users on a trial basis, subject to the terms and conditions of this Addendum.

NOW THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, CDS and ECDD agree as follows:

1. **Trial.** ECDD may provide Exchange Data to Data Users on a trial basis, solely in accordance with the Trial Usage terms and conditions set forth in the Policies.

2. **Disclaimer and Limitation.** ECDD ACKNOWLEDGES AND AGREES THAT (A) ANY AND ALL EXCHANGE DATA PROVIDED UNDER THIS ADDENDUM IS PROVIDED ON AN "AS IS," "AS AVAILABLE" BASIS, WITHOUT WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, (B) AS BETWEEN CDS AND ECDD, ECDD SHALL BE SOLELY RESPONSIBLE FOR ALL DISTRIBUTION AND USE OF ANY EXCHANGE DATA PURSUANT TO THIS ADDENDUM, AND (C) UNDER NO CIRCUMSTANCES SHALL CDS, ANY EXCHANGE OR ANY OTHER AFFILIATES OF CDS HAVE ANY LIABILITY FOR ANY EXPENSES, COSTS, DAMAGES, LOSSES AND LIABILITIES OF ANY NATURE WHATSOEVER, INCLUDING WITHOUT LIMITATION DIRECT, INDIRECT, CONSEQUENTIAL, SPECIAL, PUNITIVE OR INDIVIDUAL DAMAGES, LOST PROFITS, OR TRADING LOSSES, REGARDLESS OF THE FORM OF ACTION, AND WHETHER OR NOT FORESEEABLE, ARISING OUT OF THIS ADDENDUM OR ANY USE OF, INABILITY TO USE, OR RELIANCE UPON ANY EXCHANGE DATA PROVIDED HEREUNDER.

3. **Indemnification.** ECDD shall indemnify and hold harmless CDS Indemnified Parties from and against any and all Claims and Losses imposed on or asserted against CDS Indemnified Parties by a third party resulting from, in connection with, or arising out of (a) any distribution by ECDD of Exchange Data under this Addendum, and/or (b) any use of, inability to use, or reliance upon any Exchange Data by any Data User to which ECDD provides Exchange Data on a trial basis, whether or not authorized by ECDD.

4. **Miscellaneous.** This Addendum amends and supplements the Data Agreement and all terms thereof are hereby incorporated by reference herein. In the event of any conflict between the terms of this Addendum and the terms of the Data Agreement, the terms of this Addendum shall control.

IN WITNESS WHEREOF, the parties hereto have caused this Addendum to be executed by their duly authorized officers.

External Controlled Data Distributor

Cboe Data Services, LLC, on behalf of itself and its affiliates

Firm: _____

Signature: _____

Signature: _____

Printed Name: _____

Printed Name: _____

Title: _____

Title: _____

Date: _____



Cboe Global Markets
U.S. Market Data Policies

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Cboe Global Markets

U.S. Market Data Policies

Under the terms of the Cboe Global Markets U.S. Market Data Agreement ("**Data Agreement**"), firms receiving Exchange Data must adhere to these Cboe Global Markets U.S. Market Data Policies (the "**Policies**"). These Policies cover the receipt, use, pricing, reporting, and distribution of Exchange Data. Unless otherwise specified, and except in the case of foreign currency trading data, references herein to "Exchange Data" refer to U.S. Exchange Data. For policies specific to the receipt, use, pricing, reporting, and distribution of European Exchange Data, including terminology and pricing unique to European Exchange Data, please refer to the Cboe Europe Market Data Policy available on the Cboe Europe website.

Cboe Data Services, LLC ("**CDS**") reserves the right to update these Policies from time to time and will communicate any updates to Data Recipients via email and the Website. All capitalized terms used herein that are not defined below are defined in the Data Agreement.

1 Definitions

Controlled Data Distributor – A Data Recipient that (i) provides Exchange Data to a Data User (either an Internal Subscriber or an External Subscriber) and (ii) controls the entitlements of and display of information to such Data User. If the Data User is either an employee of the Controlled Data Distributor or an employee of an Affiliate of the Controlled Data Distributor identified on the Cboe Global Markets List of Affiliates (*i.e.*, an Internal Subscriber), such Controlled Data Distributor is considered to be an "**Internal Controlled Data Distributor**." If the Data User is not an employee of the Controlled Data Distributor or of an Affiliate thereof identified on the Cboe Global Markets List of Affiliates (*i.e.*, an External Subscriber), such Controlled Data Distributor is considered to be an "**External Controlled Data Distributor**."

Data Feed Subscriber – Any Data User outside of Data Recipient that (a) receives Exchange Data from Data Recipient and (b) for which Data Recipient cannot substantially control Exchange Data for the purposes of reporting usage or qualification.

Data Recipient – A third party that receives a data feed directly from CDS or through a third party that is an Uncontrolled Data Distributor and includes (a) any Person that receives and uses Exchange Data for internal purposes only, and (b) any Person that receives and distributes Exchange Data, in each case pursuant to and in accordance with the terms and conditions of this Agreement and Exchange Requirements.

Data User – Any Person that receives Exchange Data from Data Recipient.

Display Usage – The access to and/or use of Exchange Data by a Data User via a graphical user interface, application or other medium which displays Exchange Data.

Non-Display Usage – Any accessing, use, processing and/or consuming of Exchange Data that is not Display Usage, including but not limited to accessing, use, processing and/or consuming of Exchange Data by a machine or automated device for a purpose other than to display Exchange Data.

Non-Professional Data User – If working in the United States, a natural person who is not: (i) registered or qualified in any capacity with the Securities Exchange Commission, the Commodity Futures Trading Commission, any state securities agency, any securities exchange or association; any commodities or futures contract market or association; (ii) engaged as an "investment adviser" as that term is defined in Section 201(11) of the Investment Advisers Act of 1940 (whether or not registered or qualified under that Act); or (iii) employed by a bank or other organization exempt from registration under federal or state securities laws to perform functions that will require registration or qualification if such functions were performed for an organization not so exempt." Additionally, any natural person who works outside of the United States will also be considered a "Non-Professional Data User" if he or she is similarly situated as someone who would be considered a "Non-Professional Data User" in the United States.

Professional Data User – Any Data User other than a Non-Professional User.

Uncontrolled Data Distributor – A Data Recipient that is authorized by CDS to distribute Exchange Data externally to a customer that is not an Affiliate of Data Recipient where the Data Recipient does not control the entitlements of and display of information to such customer (*i.e.*, a "Data Feed Subscriber").

2 Display Requirements

Attribution

Each Data Recipient must identify CDS as the source of any Exchange Data through use of the Cboe name, or of the applicable Exchange – “Cboe BZX Exchange”, “Cboe BYX Exchange”, “Cboe EDGA Exchange”, “Cboe EDGX Exchange”, or “Cboe FX” – on applicable displays of Exchange Data. Distributors of Cboe Global Markets quote or last sale information to Data Users must provide a prominent attribution message on all displays, including wall boards, tickers, mobile devices, and audio announcements on voice response services. In the case of a ticker, the attribution message should be interspersed with the Exchange Data at least every 90 seconds.

Quote/Last Sale Information Source	Required Attribution Message
BZX Depth, BZX Top, BZX Last Sale, or BZX Summary Depth	Cboe BZX Real-Time Quote, Cboe BZX Real-Time Last Sale or Cboe BZX Real-Time Price
BYX Depth, BYX Top, BYX Last Sale, or BYX Summary Depth	Cboe BYX Real-Time Quote, Cboe BYX Real-Time Last Sale or Cboe BYX Real-Time Price
EDGX Depth, EDGX Top, EDGX Last Sale, or EDGX Summary Depth	Cboe EDGX Real-Time Quote, Cboe EDGX Real-Time Last Sale or Cboe EDGX Real-Time Price
EDGA Depth, EDGA Top, EDGA Last Sale, or EDGA Summary Depth	Cboe EDGA Real-Time Quote, Cboe EDGA Real-Time Last Sale or Cboe EDGA Real-Time Price
Cboe Equities One	Cboe One Real-Time Quote, Cboe One Real-Time Last Sale or Cboe One Real-Time Price ¹
Cboe ETF Implied Liquidity	Cboe ETF Implied Liquidity Quote
Cboe FX US Depth	Cboe FX US Quote, Cboe FX US Rate
Cboe FX London Depth	Cboe FX London Quote, Cboe FX London Rate

If the Exchange Data is being provided on a delayed basis, the Data Recipient must appropriately attribute Exchange Data as delayed (e.g., “Data Delayed 15 Minutes”). Alternatives for Exchange Data attribution on displays may be permitted with the prior written approval of CDS if the alternative accurately and unambiguously describes the source of the Exchange Data. Requests for alternative attribution may be made via email to marketdata@cboe.com.

Marketing Materials

Each Data Recipient may use CDS’ corporate name, the names of CDS’ market data products, and the trademarks of Cboe set forth in the Brand Standards Manual available through contacting Market Data Services at marketdata@cboe.com in any marketing, publicity or advertising materials related to the business of the Data Recipient, *provided that* such use is solely for purposes of exercising Data Recipient’s rights under the Data Agreement and is in compliance with the guidelines set forth in the Brand Standards Manual.

3 Record Retention Requirements

Each Data Recipient must create and maintain complete and accurate books and records relating to the Data Recipient’s performance of its obligations and exercise of its rights under the Data Agreement, including without limitation the receipt, use, display and distribution of Exchange Data and the administration of the Subscriber Agreement or equivalent, if applicable.

4 Data Recipient Approval Requirements

Each firm that is requesting Exchange Data must complete and submit to CDS the following: (i) Data Agreement, (ii) List of Affiliates (if applicable); (iii) Exchange Data Order Form and System Description; and (iv) Service Facilitator List (if applicable). The Exchange Data Order Form and System Description requires firms to provide key contact information, identify the desired feed(s) and a description of the system that makes use of Exchange Data internally or if you are distributing externally, a description of the service(s) and Exchange Data you plan to provide to Data Users.

Each completed Data Agreement, List of Affiliates (if applicable), Exchange Data Order Form and System Description, and Service Facilitator List (if applicable) should be emailed to marketdata@cboe.com for approval.

¹ Firms that distribute CTA consolidated volume must comply with the [CTA Consolidated Volume Policy](#) as provided on the [CTA Plan website](#).

5 Distribution to Affiliates of Data Recipient

Any Data Recipient that distributes Exchange Data to one or more of its Affiliates must complete and submit the Cboe Global Markets List of Affiliates showing the Affiliate(s) receiving Exchange Data. An "Affiliate" is defined as any entity that, from time to time, directly or indirectly Controls, is Controlled by, or is under common Control with Data Recipient. "Control" means the power to direct or cause the direction of the management of policies of another entity, whether through the ownership of voting securities, by contract, or otherwise. By submitting the names of its Affiliate(s), the Data Recipient agrees that the contact information provided shall be deemed to be the contact information for each Affiliate.

One or more of the entities (each a "Connected Entity") that is part of the group comprised of the Data Recipient and the Affiliates listed on the List of Affiliates (collectively, the "Affiliate Group") is permitted to own connectivity with CDS to receive Exchange Data directly from CDS. Each Connected Entity shall be identified in writing to CDS. Any member of the Affiliate Group that also receives Exchange Data indirectly from another Data Recipient (in addition to a Connected Entity) that is an Uncontrolled Data Distributor is not required to complete and return to CDS a separate Data Agreement and Exchange Data Order Form and System Description. Rather that entity is bound by the same Data Agreement and other relevant documents executed by the applicable member of the Affiliate Group.

6 Uncontrolled Data Distributor Requirements

To become an Uncontrolled Data Distributor, the Data Recipient must describe, using the Exchange Data Order Form and System Description, its plan to distribute Exchange Data externally to any customer that is not an Affiliate of the Data Recipient.

Request Process

Uncontrolled Data Distributors are responsible for either (i) directing each prospective Data Recipient to download the required documents from the Website, or (ii) providing a hard copy of each required document to the prospective Data Recipient. Required documents include the following:

- Signed Data Agreement
- Completed and signed Exchange Data Order Form and System Description
- Completed and signed Cboe Global Markets List of Affiliates (if applicable)
- Completed and signed Cboe Global Markets Service Facilitator List (if applicable)

Approval Process

After the required documents have been completed, the prospective Data Recipient must submit the required documents to CDS (as described above) for approval. CDS will review the documents and may contact the Data Recipient directly for additional information. The review of the documents includes, but is not limited to, a review of the intended use of the Exchange Data and the entitlements.

Upon approval, CDS will notify both the Data Recipient and the Uncontrolled Data Distributor via fax or email. Once approved by CDS, the Uncontrolled Data Distributor is authorized to provide the approved Exchange Data to the Data Recipient. **A new Data Recipient may not receive Exchange Data until and unless CDS has specifically approved the distribution of the requested Exchange Data product.** Please note that if an Uncontrolled Data Distributor provides Exchange Data to an unapproved Data Recipient or releases any Exchange Data prior to CDS' approval, the Uncontrolled Data Distributor is responsible for paying CDS any fees and other charges that would have been assessed such Data Recipient during the unauthorized time frame had the Data Recipient and release of Exchange Data to such Data Recipient been approved.

7 Uncontrolled Data Distributor Reporting

CDS requires all Uncontrolled Data Distributors of Exchange Data to submit reports, on a monthly basis, providing firm and Exchange Data details (as described below) for each Data Feed Subscriber receiving the Exchange Data. Each such report must include the following:

- Each Data Recipient's name, contact information, and billing address
- Address at which each Data Recipient receives the Exchange Data

- Exchange (BZX, BYX, EDGA, EDGX, Cboe FX US, Cboe FX London or product name if the Exchange Data is an aggregate of multiple Cboe Global Markets exchanges) and type of Exchange Data subscribed to by each Data Recipient
- The earliest date upon which each Data Recipient received or will receive such Exchange Data from the Uncontrolled Data Distributor (installation date)
- The last date upon which each Data Recipient received or will receive such Exchange Data from the Uncontrolled Data Distributor (termination date)

Uncontrolled Data Distributors may report to CDS by entering details directly or via upload files in CSV format. Monthly reporting for the prior month's activity is due on the 15th of the current month (*i.e.*, August 15th is the due date for July reporting).

Please contact marketdata@cboe.com if you have any questions about reporting requirements. If you are newly reporting to CDS, a user login will be created for you to access the system.

8 Controlled Data Distributor Requirements and Reporting

Internal Controlled Data Distributors

Internal Controlled Data Distributors have the right to provide Exchange Data to employees of the Internal Controlled Data Distributor or any Affiliate thereof (*i.e.*, Internal Subscribers) identified on a Cboe Global Markets List of Affiliates submitted by the Internal Controlled Data Distributor to CDS.

Internal Controlled Data Distributors are not required to administer a Subscriber Agreement or equivalent with Internal Subscribers. Only a Data Agreement, List of Affiliates (if applicable) and Exchange Data Order Form and System Description completed by the Internal Controlled Data Distributor is required to be submitted to CDS.

External Controlled Data Distributors

External Controlled Data Distributors must administer a Subscriber Agreement **or equivalent** to each Data User, or External Subscriber, whether an individual or a firm (except for Trial Users as defined below). CDS will not administer this agreement or equivalent to an External Controlled Data Distributor's customers.

The Data Agreement specifies that External Controlled Data Distributors must administer Subscriber Agreements to all External Subscribers. If an External Controlled Data Distributor opts not to administer a Subscriber Agreement, then the External Controlled Data Distributor is required to indemnify CDS in the event of a claim by an External Subscriber or otherwise.

External Controlled Data Distributors have four options to administer the Subscriber Agreement **or equivalent**.

Administration Options for the Subscriber Agreement	
1. Data Recipient Indemnification	Data Recipient administers its own agreement to External Subscribers as an equivalent to the Subscriber Agreement. Submission of a sample copy of the Data Recipient's agreement, and any amendments thereto, is required.
2. Incorporation by Reference	Data Recipient adds specific language into the Data Recipient's own agreement with the External Subscriber. Submission of a sample copy of the Data Recipient's agreement, and any amendments thereto, is required.
3. Online Click-Through Subscriber Agreement	Data Recipient offers the agreement via the Internet. Submission of a sample copy of the Data Recipient's agreement, and any amendments thereto, is required.
4. Hard Copy Subscriber Agreement	Data Recipient provides External Subscriber with a paper copy of the Subscriber

	Agreement. Data Recipient retains executed originals, but does <u>not</u> submit the agreement to CDS.
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Option 1 – Data Recipient Indemnification

Section 11 of the Data Agreement permits External Controlled Data Distributors to choose to indemnify CDS in lieu of administering the Subscriber Agreement to each External Subscriber.

External Controlled Data Distributors that opt for indemnification are required to include certain basic protections and rights in their own legally enforceable customer agreements that ensure CDS is protected to the same extent as if the External Controlled Data Distributors had administered the Subscriber Agreement to each External Subscriber. An External Controlled Data Distributor may then provide the Exchange Data immediately after administering its own account agreement to the External Subscriber.

External Controlled Data Distributors that opt for indemnification must follow these guidelines:

1. Prior to distributing the Exchange Data, the External Controlled Data Distributor will have in place a legally valid and enforceable contract (a "Data Recipient Account Agreement") with the External Subscriber that (i) governs the accounts held by the External Subscriber with the External Controlled Data Distributor through which the External Subscriber is entitled to access the Exchange Data, including any limitations on the External Subscriber's right to redistribute the Exchange Data, and (ii) protects CDS and the CDS Indemnified Parties (as defined in the Data Agreement) to the same extent as if the External Controlled Data Distributor had presented and the External Subscriber had signed the Subscriber Agreement.
2. In terms of recordkeeping and retention, Data Recipient Account Agreements are subject to applicable Exchange requirements. In the event of a dispute with External Subscriber(s) relating to the Exchange Data, the External Controlled Data Distributor agrees to provide CDS with copies of the relevant Data Recipient Account Agreements.
3. External Controlled Data Distributor must indemnify CDS, all CDS Indemnified Parties and any third parties against any assertion of claims or losses relating to the Exchange Data made by an External Subscriber who receives the Exchange Data from the External Controlled Data Distributor (or any person relying upon the Exchange Data received by such External Subscriber) arising from External Controlled Data Distributor's election to distribute Exchange Data to such External Subscriber under a Data Recipient Account Agreement rather than under a Subscriber Agreement.

Option 2 – Incorporation by Reference

In lieu of administering the exact language of the Subscriber Agreement to each Subscriber, External Controlled Data Distributors may choose to add specific language protecting CDS to their own legally valid and enforceable customer contract (each a "Data Recipient Account Agreement") in addition to offering a copy of the Subscriber Agreement. Thus, by signing the Data Recipient Account Agreement, External Subscribers also assent to the standard Subscriber Agreement terms.

External Controlled Data Distributors that opt for "Incorporation by Reference" must follow these instructions:

1. Include the language below prominently on the signature page of the Data Recipient Account Agreement. Prior to including this language in the Data Recipient Account Agreement, in the blank provided, insert the term in the Data Recipient Account Agreement that references the person receiving the information (i.e., customer, account holder, subscriber, member, etc.).

By executing this Agreement, _____, (known as "Subscriber" in the Subscriber Agreement) agrees that:

- a. it has read and agrees to be bound by the Subscriber Agreement, a copy of which is attached hereto;
- b. the Data Recipient/Vendor (i) is not an agent of Cboe Data Services, LLC; (ii) is not authorized to add to or delete any terms or provisions from the Subscriber Agreement; and (iii) is not authorized to modify any provision of the Subscriber Agreement; and

- c. no provision has been added to or deleted from the Subscriber Agreement and that no modifications have been made to it. Both the Subscriber and the person executing on behalf of the Subscriber warrant that the Subscriber is legally able to undertake the obligations set forth in and the signatory is duly authorized to bind the Subscriber to the Subscriber Agreement.

2. Provide each External Subscriber with a copy of the Subscriber Agreement.

Once the Data Recipient Account Agreement is signed by both the External Subscriber and the External Controlled Data Distributor, and the External Subscriber has been provided a copy of the Subscriber Agreement, CDS considers the External Subscriber to be authorized to receive Exchange Data. Please note that CDS does **not** require External Controlled Data Distributors to submit copies of the executed Data Recipient Account Agreements to CDS.

Option 3 – Online Click-Through Version

External Controlled Data Distributors are permitted to offer an online click-through version of the Subscriber Agreement to each External Subscriber, but if a Subscriber Agreement is not administered properly, the External Controlled Data Distributor must indemnify CDS in the event of a claim.

To offer an online click-through version of the Subscriber Agreement to External Subscribers, copy the full text of the Subscriber Agreement and complete the necessary programming to ensure the External Subscriber can enter the following information:

- Firm Name
- Full Name of Person Authorized to Sign the Agreement
- Title of Person Authorized to Sign the Agreement
- Date of Authorization

The following language must be provided to the External Subscriber where the External Subscriber must agree to it by marking the applicable checkbox:

"ACCEPTED AND AGREED: I, an authorized officer of the Subscriber to which the preceding terms and conditions refer, acknowledge that I have read the preceding terms and conditions of this Agreement, that I understand them, and that I hereby manifest my assent to, and my agreement to comply with, those terms and conditions by "clicking" on the following box."

Submission of a sample copy of the Data Recipient's agreement, and any amendments thereto, is required.

Once these steps have been completed, CDS considers the External Subscriber to be authorized to receive Exchange Data.

Option 4 – Hard Copy Agreement

External Controlled Data Distributors are permitted to offer a hard copy/paper version of the Subscriber Agreement to each External Subscriber. CDS permits External Controlled Data Distributors to accept faxed and scanned copies of the agreement as legal documents.

External Controlled Data Distributors that opt for the hard copy version of the Subscriber Agreement should follow these instructions:

1. Copy the text of the Subscriber Agreement onto company letterhead.
2. Print the Subscriber Agreement on your organization's letterhead for your records.

Once the Subscriber Agreement is signed by both the External Subscriber and the External Controlled Data Distributor, and the External Subscriber has been provided an executed copy of the Subscriber Agreement, CDS considers the External Subscriber to be authorized to receive Exchange Data.

Display Usage Reporting

Controlled Data Distributors are required to report the number of devices used for Display Usage to CDS depending on the requirements for the specified data product as follows:

Product	Internal Display Usage Reporting Requirement	External Display Usage Reporting Requirement
Cboe Equities Depth	Monthly Reporting Required	Monthly Reporting Required
Cboe Equities Top	No Reporting Required	Monthly Reporting Required
Cboe Equities Last Sale	No Reporting Required	Monthly Reporting Required
Cboe Equities Summary Depth	No Reporting Required	Monthly Reporting Required
Cboe Equities One Feed	No Reporting Required	Monthly Reporting Required
Cboe ETF Implied Liquidity Feed	No Reporting Required	Monthly Reporting Required
Cboe BZX Options Depth	Monthly Reporting Required	Monthly Reporting Required
Cboe FX US Depth	No Reporting Required	Monthly Reporting Required
Cboe FX London Depth	No Reporting Required	Monthly Reporting Required

If a product shown above requires no reporting, Controlled Data Distributors do not have to report the Data Users receiving the controlled data or Data User display quantities. For products that require Display Usage Reporting, Controlled Data Distributors must count every Professional Data User and Non-Professional Data User to which they provide Exchange Data. Thus, the Controlled Data Distributor's count will include every Data User that accesses the Exchange Data, regardless of the purpose for which the Data User uses the Exchange Data. Controlled Data Distributors must report all Professional Data Users and Non-Professional Data Users in accordance with the following:

- In connection with a Controlled Data Distributor's distribution of Exchange Data, the Controlled Data Distributor should count as one Data User each unique Data User that the Controlled Data Distributor has entitled to have access to the Exchange Data. However, where a device is dedicated specifically to a single individual, the Controlled Data Distributor should count only the individual and need not count the device.
- The Controlled Data Distributor should identify and report each unique Data User. If a Data User uses the same unique method to gain access to the Exchange Data, the Controlled Data Distributor should count that as one Data User. However, if a unique Data User uses multiple methods to gain access to the Exchange Data (e.g., a single Data User has multiple passwords and user identifications), the Controlled Data Distributor should report all of those methods as one Data User.
- Controlled Data Distributors should report each unique individual person who receives access through multiple devices as one Data User so long as each device is dedicated specifically to that individual.
- If a Controlled Data Distributor entitles one or more individuals to use the same device, the Controlled Data Distributor should include only the individuals, and not the device, in the count.

Controlled Data Distributors must submit usage reports of real-time Exchange Data on a monthly basis using the Data Recipient Declaration system by entering details directly or via upload files in CSV format. TCB Data is available as an alternative if requested. Monthly reporting for the prior month's activity is due on the 15th of the current month (*i.e.*, August 15th is the due date for July reporting). For Display Usage reporting, previous month quantities will be carried over on a month-to-month basis to aid in the reporting of Data Users and firms may submit revised reporting in order to correct errors in the reporting of total quantities or Data User categorization. Controlled Data Distributors may only submit revised reporting within 60 days of the date where usage activity occurred 30 calendar days after the reporting due date (*i.e.*, June 14th for April reporting). Each report must include the following:

- Data User Firm name, contact information, and billing address
- Address at which Data User receives the Exchange Data
- Type of service
- The earliest date upon which a Data User receives the Exchange Data from the Controlled Data Distributor
- The last date upon which a Data User receives the Exchange Data from the Controlled Data Distributor (termination date)
- Number of Display Data Users

Controlled Data Distributors that distribute Exchange Data to Data Users that have obtained an Enterprise license are not required to report Data User quantities monthly, but are required to provide Data User quantities for each Data User every six months.

Non-Display Usage Reporting

Non-Display Usage may include but is not limited to:

- Algorithmic/automated trading
- Order routing
- Surveillance
- Order management
- Risk management

Firms operating a registered Automated Trading System (ATS), Electronic Communication Network (ECN) or National Securities Exchange trading platform will be required to (i) promptly provide CDS with written notice in the case that equity depth Exchange Data is or will be used within the trading platform (including any order routing system dedicated for use within the trading platform); and (ii) provide CDS with written notice when equity depth Exchange Data is discontinued for use within the trading platform or dedicated order router.

Usage Fees

For External Controlled Data Distributors, Display Usage fees by Data Users will be collected by the External Controlled Data Distributor and then remitted to CDS, including Enterprise or Digital Media fees, if applicable. For Controlled Data Distributors of equity depth Exchange Data, reporting will be required and Display Usage fees will apply for all Data Users except those Data Users using equity depth Exchange Data solely for the purpose of software development, quality assurance testing, sales support relating to redistribution, or for technical monitoring of systems using equity depth Exchange Data and not in support of other commercial/business functions. Non-Display Usage fees will apply for Distributors that use equity depth Exchange Data within a registered ATS, ECN or Exchange. See Section 12 of these Policies for more details.

Notice and Enforcement

Each External Controlled Data Distributor shall (i) enforce each of its External Subscriber's compliance with the terms of the Subscriber Agreement; (ii) provide CDS written notice of any violation thereof by an External Subscriber, immediately upon becoming aware of such violation; (iii) provide CDS notice of termination of any Subscriber Agreement, immediately upon receiving or serving notice of such termination; (iv) provide CDS any assistance as CDS may reasonably request in enforcing CDS' rights under any Subscriber Agreement; (v) upon CDS's request, cease providing any Exchange Data to any External Subscriber; and (vi) provide CDS written notice promptly upon becoming aware of any acts or omissions of any External Subscriber or other person, in addition to those otherwise required to be reported herein, which External Controlled Data Distributor believes, in its reasonable discretion, might jeopardize or prejudice the rights of CDS in any Exchange Data or threaten the security or operations of any systems or other technology utilized by or on behalf of CDS or any Data Recipient to disseminate any Exchange Data.

Trial Usage

External Controlled Data Distributors are permitted to provide real-time Exchange Data to their Data Users through a trial or for demonstration purposes for a limited time. If an External Controlled Data Distributor desires to provide Exchange Data to any Data User on a trial basis, such External Controlled Data Distributor is not required to qualify Data Users through one of the methods identified above in the event the External Controlled Data Distributor (i) enters into the External Controlled Data Distributor Trial Addendum (the "**ECDD Trial Addendum**") and (ii) fully complies with each of the following requirements:

- No Data User shall be permitted to use Exchange Data pursuant to the ECDD Trial Addendum for a period of longer than thirty (30) days (the "**Trial Period**"). At the end of the Trial Period, the Data User that has participated in the trial must cease all use of the Exchange Data or be qualified (as of the effective date of termination of the Trial Period) through one of the methods identified above.
- Each Data User may participate in the trial only once for each Exchange Data product offered by CDS.
- The External Controlled Data Distributor must (i) continuously maintain a list of each Data User to which Exchange Data is provided under the ECDD Trial Addendum, together with the Data User's firm name and contact information, the specific Exchange Data product to which such Data User was or will be provided access, the date such Data User commenced or will commence receiving the Exchange Data, and the last date upon which the Data User received or will receive the Exchange Data pursuant to the ECDD Trial Addendum; and (ii) provide such documentation to CDS via marketdata@cboe.com, promptly upon CDS's request.

9 Service Facilitator

A Data Recipient may delegate any of its responsibilities, obligations or duties under or in connection with the Data Agreement to an authorized third party agent ("**Service Facilitator**"), which may discharge those responsibilities, obligations or duties on behalf of the Data Recipient in accordance with the Data Agreement; *provided, however*, that the Data Recipient shall be and will remain responsible for compliance by such Service Facilitators with all applicable terms and conditions of the Data Agreement and all other acts and omissions thereby in connection with the receipt, use and distribution of the Exchange Data. Service Facilitators may support one or more functions for the Data Recipient including, but not limited to, website operation, software development, facilities and equipment operation, and service installation. The Data Recipient must, through a legally enforceable written agreement with each Service Facilitator:

- Ensure CDS is protected to the same extent as if the Service Facilitator were a party to the Data Agreement, including without limitation by permitting CDS to audit the Service Facilitator on the same terms as CDS is permitted to audit the Data Recipient under the Data Agreement.
- Ensure no terms of such agreement conflict with the terms of the Data Agreement.
- Ensure Exchange Data or controlled data distribution of Exchange Data to a Data Recipient may occur only after the Data Recipient is authorized by CDS, or Data Recipient is qualified through one of the Controlled Data Distributor qualification methods outlined above.
- Ensure the Data Recipient, and not the Service Facilitator, controls all entitlement of Exchange Data to the Data Recipient.

Notwithstanding the foregoing, the Service Facilitator must sign a Data Agreement and must fulfill all requirements of the Exchange if the Service Facilitator receives Exchange Data directly from CDS. Finally, if the Data Recipient uses any Service Facilitators, the Data Recipient must provide a list of all Service Facilitators to CDS on the Service Facilitator List.

10 Delayed Data

Once a period of time has passed since the dissemination of Exchange Data by CDS, Real-time Exchange Data will become Delayed Exchange Data. There are different requirements for the distribution of Delayed Exchange Data as compared to Real-time Exchange Data. The following definitions apply:

- **Delay Period** – The period of time that has passed since the dissemination of Exchange Data by CDS, which is currently 15 minutes.
- **Real-time Exchange Data** – Exchange Data distributed prior to the Delay Period.
- **Delayed Exchange Data** – Exchange Data distributed after the Delay Period.
- **End-of-Day Exchange Data** – Exchange Data distributed after the market has closed for the current trading day and after the Delay Period.
- **Historical Exchange Data** – Exchange Data distributed after the market has closed for the current trading day and after the Delay Period on a T+1 basis.

Controlled Data Distributors of Delayed Exchange Data are not required to qualify Data Users in respect of receipt of Delayed Exchange Data identified in the Controlled Data Requirements section of these Policies. Thus, Controlled Data Distributors of Delayed Data are not required to administer a Subscriber Agreement or equivalent with such Data Users. In addition, Uncontrolled Data Distributors of Delayed Exchange Data are not required to obtain a Data Agreement from Data Users receiving Delayed Exchange Data or report Data Users receiving Delayed Data. Each Delayed Data Distributor must obtain approval and describe, using the Exchange Data Order Form and System Description, its plan to distribute Delayed Data externally to any Data User that is not an Affiliate of the Data Recipient. Data Recipients of Delayed Exchange Data are not permitted to distribute the Delayed Exchange Data as an Uncontrolled Data Distributor. Additionally, each Delayed Data Distributor of End-of-Day or Historical ETF Implied Liquidity Exchange Data must obtain approval and describe, using the Exchange Data Order Form and System Description, its plan to distribute End-of-Day or Historical Exchange Data to any Data User that is not an Affiliate of the Data Recipient. Data Recipients of End-of-Day or Historical ETF Implied Liquidity Exchange Data are not permitted to distribute the End-of-Day or Historical ETF Implied Liquidity Exchange Data as an Uncontrolled or Controlled Data Distributor. The waiver of the qualification and agreement requirement by CDS does not limit the Controlled Data Distributor's or Uncontrolled Data Distributor's obligations as described within the Data Agreement executed with CDS.

For Distributors providing Delayed Data, CDS requires that an appropriate delay message be provided to Subscribers for all displays of Exchange Data. The delay message must prominently appear on all displays containing Delayed Data, such as at or near the top of the page. In the case of a ticker, the delay message should be interspersed with the market data at least every 90 seconds. Examples of appropriate delay messages are as follows: "Data Delayed 15 minutes", "Data Delayed 24 hours", "Delayed Data", "Del-15", and "Data Delayed until Midnight CET".

11 Derived Data

"Derived Data" is pricing data or other data that (i) is created in whole or in part from Exchange Data and (ii) cannot be readily reverse-engineered to recreate Exchange Data or used to create other data that is a reasonable facsimile or substitute for Exchange Data. In addition, Derived Data that contains price data and is based upon a single security symbol or currency pair is generally fee liable at the underlying product rates. Data Recipients distributing Derived Data must use the Exchange Data Order Form and System Description to describe any Derived Data created using Exchange Data. Distributors of Derived Data are not required to report Data Users receiving Derived Data. Distribution of Derived Data does not require the Data User receiving Derived Data to sign a Data Agreement with CDS, but note, if a distributor opts not to administer a Subscriber Agreement, then the distributor is required to indemnify CDS in the event of a claim.

12 Fees

Fees for U.S. Exchange Data are displayed on the Website at:

<http://www.bats.com/us/equities/membership/pricing/>
http://www.batsoptions.com/support/fee_schedule/

If a Data Recipient is receiving identical Exchange Data from (i) multiple Uncontrolled Data Distributors or (ii) from one or more Uncontrolled Data Distributors and CDS, the Data Recipient will only be required to pay the distribution fee once to CDS – either the Internal Distribution Fee or the External Distribution Fee – depending on whether the Data Recipient is distributing the Exchange Data internally or externally. Notwithstanding the foregoing, if a Data Recipient is distributing the Cboe Equities One Feed internally and externally, the Data Recipient will be required to pay both the Internal Distribution Fee and the External Distribution Fee.

Historical Exchange Data Service

Data Recipients can subscribe to Cboe Historical Exchange Data on a T+1 basis. Up to three months of data is available via download from the Website. Additional data can be uploaded to a 1TB hard drive for a single fee per drive per Exchange. A web login account is required to subscribe to Historical Data on the Website. For assistance, please visit http://www.bats.com/us/equities/market_data_products/ or contact Market Data Services at 212.378.8821 or marketdata@cboe.com.

Other Data Feeds

To request a subscription to the Cboe Equities Auction or Cboe BZX Options Auction Feed, please contact Cboe Global Markets Market Data Services at 212.378.8821 or marketdata@cboe.com.

13 Audit

CDS has the right to conduct comprehensive audits of Data Recipients on a regular basis. The purpose of the audits is to ensure that Data Recipients that distribute Exchange Data are complying with the terms of their agreements with CDS. CDS will review Data Recipients to verify that they are in compliance with CDS' data requirements. Audits will cover a Data Recipient's market data infrastructure for three (3) years preceding the date of the audit. The Data Recipient's liability shall be limited to unpaid fees, together with interest, for underreporting, underpayment or other financial noncompliance that has occurred during the audit period, plus any costs and expenses as set forth in Section 10 of the Data Agreement, provided such underreporting, underpaying or other financial non-compliance is a result of a good faith error by Data Recipient.

Please refer to Section 10 of the Data Agreement for more details regarding CDS' audit right.

Exhibit H

Exhibit Request:

A complete set of documents comprising the applicant's listing applications, including any agreements required to be executed in connection with listing and a schedule of listing fees. If the applicant does not list securities, provide a brief description of the criteria used to determine what securities may be traded on the exchange. Provide a table of contents listing the forms included in this Exhibit H.

Response:

Cboe EDGA Exchange, Inc. does not intend to offer original listing on the Exchange upon commencement of operations, but rather, intends on trading only securities that have been admitted pursuant to unlisted trading privileges. For a description of the listing standards for Cboe EDGA Exchange, Inc. please refer to Chapter XIV of the Exchange's Proposed Rules. See Exhibit B, *supra*. These listing standards are substantially similar to the listing standards used by Cboe BZX Exchange, Inc., as well as the ISE Stock Exchange, LLC, the equities trading facility of the International Securities Exchange.

Exhibit K

Exhibit Request:

This Exhibit is applicable only to exchanges that have one or more owners, shareholders, or partners that are not also members of the exchange. If the exchange is a corporation, please provide a list of each shareholder that directly owns 5% or more of a class of a voting security of the applicant. If the exchange is a partnership, please provide a list of all general partners and those limited and special partners that have the right to receive upon dissolution, or have contributed, 5% or more of the partnership's capital. For each of the persons listed in the Exhibit K, please provide the following:

1. Full legal name;
2. Title or Status;
3. Date title or status was acquired;
4. Approximate ownership interest; and
5. Whether the person has control, a term that is defined in the instructions to this Form.

Response:

Cboe EDGA Exchange, Inc. ("EDGA") is wholly-owned by Direct Edge LLC ("Direct Edge"). Direct Edge is the sole stockholder of the Exchange and acquired its interest in the Exchange on July 22, 2010. Direct Edge exercises "control" over the Exchange, as that term is defined in the Form 1 instructions.

Direct Edge is wholly-owned by Cboe Bats, LLC (f/k/a CBOE V, LLC). Cboe Bats, LLC is the sole member of Direct Edge, and acquired its interest in Direct Edge on January 31, 2014. Cboe Bats, LLC exercises "control" over the Exchange, as that term is defined in the Form 1 instructions.

Cboe Bats, LLC is wholly-owned by Cboe Global Markets, Inc. Cboe Global Markets, Inc. is the sole member of Cboe Bats, LLC, and acquired its interest in Cboe Bats, LLC on September 23, 2016. Cboe Global Markets, Inc. exercises "control" over the Exchange, as that term is defined in the Form 1 instructions.

Exhibit M

Exhibit Request:

Provide an alphabetical list of all members, participants, subscribers or other users, including the following information:

1. Name,
2. Date of election to membership or acceptance as a participant, subscriber or other user,
3. Principal business address and telephone number,
4. If member, participant, subscriber or other user is an individual, the name of the entity with which such individual is associated and the relationship of such individual to the entity (e.g., partner, officer, director, employee, etc.),
5. Describe the type of activities primarily engaged in by the member, participant, subscriber, or other user (e.g., floor broker, specialist, odd lot dealer, other market maker, proprietary trader, non-broker dealer, inactive or other functions). A person shall be "primarily engaged" in an activity or function for purposes of this item when that activity or function is the one in which that person is engaged for the majority of their time. When more than one type of person at an entity engages in any of the six types of activities or functions enumerated in this item, identify each type (e.g., proprietary trader, Registered Competitive Trader and Registered Competitive Market Maker) and state the number of members, participants, subscribers, or other users in each, and
6. The class of membership, participation or subscription or other access.

Response:

Attached please find a list of the current Members and Sponsored Participants accepted as Users of the Exchange.

Company Name	BZX Approval Date	BYX Approval Date	EDGA Approval Date	EDGX Approval Date	CBOE Approval Date	C2 Approval Date	Type of User	Address	Phone Number	Primary Activities
ABN AMRO Clearing Chicago, LLC	10/15/2008	10/1/2010	5/25/2010	5/27/2010	5/13/1985	9/24/2010	Member / TPH	175 W Jackson Boulevard Suite 400 Chicago, IL 60604	312-604-8000	Market Maker
ACS Execution Services, LLC	1/15/2016	1/15/2016	1/15/2016	1/15/2016	NA	NA	Member / TPH	12 Broad Street 2nd Floor Red Bank, NJ 07701	732-204-8999	Proprietary
Agency Desk, LLC	7/1/2009	NA	NA	NA	NA	NA	Member / TPH	590 Madison Avenue 21st Floor New York, NY 10022	212-935-9835	Market Maker
Akuna Securities, LLC	9/15/2015	NA	NA	8/14/2017	2/2/2012	2/12/2015	Member / TPH	333 S Wabash Avenue Suite 2600 Chicago, IL 60604	312-994-4640	Market Maker
Albert Fried & Company, LLC	8/18/2008	4/15/2011	5/18/2010	5/18/2010	NA	NA	Member / TPH	31 W 52nd Street New York, NY 10019	212-827-7000	Agency
Alpha Trading LP	10/24/2017	10/24/2017	10/24/2017	10/24/2017	NA	NA	Member / TPH	640 W California Avenue Sunnyvale, CA 94086	408-990-1940	Market Maker Proprietary Trading
Alpine Securities Corporation	11/3/2008	11/15/2010	NA	NA	NA	NA	Member / TPH	39 Exchange Place Salt Lake City, UT 84111	801-355-5588	Agency
Andrie Trading LLC	NA	NA	NA	NA	10/1/1999	NA	Member / TPH	440 S LaSalle Street Suite 1110 Chicago, IL 60605	312-863-8195	
Apex Clearing Corporation	6/5/2012	6/5/2012	6/5/2012	6/5/2012	6/6/2012	6/6/2012	Member / TPH	One Dallas Center 350 N St. Paul, Suite 1300 Dallas, TX 75201	214-765-1055	Clearing Firm
Archipelago Securities, LLC	8/18/2008	9/1/2010	5/25/2010	5/27/2010	NA	NA	Member / TPH	353 N Clark Street Suite 3200 Chicago, IL 60654	312-836-6700	Limited Routing Facility of NYSE Arca, Inc., NYSE, LLC and NYSE MKT, LLC
Athena Capital Research, LLC	7/1/2009	10/20/2010	NA	NA	NA	NA	Sponsored Participant	440 9th Avenue 11th Floor New York, NY 10001	212-931-9056	Proprietary
ATM Execution LLC	3/15/2012	3/15/2012	3/21/2012	3/21/2012	NA	NA	Member / TPH	599 Lexington Avenue 21st Floor New York, NY 10022	646-562-1010	Market Maker
Auerbach Grayson and Company, LLC	NA	NA	12/15/2015	NA	NA	NA	Member / TPH	25 W 45th Street Suite 16 New York, NY 10036	212-557-4444	Arbitrage/Riskless
Barclays Capital, Inc.	8/18/2008	10/1/2010	5/14/2010	5/14/2010	9/22/2008	10/6/2010	Member / TPH	745 7th Avenue New York, NY 10019	212-526-7000	Institutional
Bats Trading, Inc.	10/23/2008	9/1/2010	5/14/2010	5/14/2010	NA	NA	Member / TPH	8050 Marshall Drive Suite 120 Lenexa, KS 66214	913-815-7000	Limited Routing Facility of the Cboe Exchanges (BZX, BYX, EDGA, EDGX)
Bay Crest Partners, LLC	10/15/2008	NA	5/25/2010	5/27/2010	NA	NA	Member / TPH	40 Wall Street 42nd Floor New York, NY 10005	212-480-1400	Agency
Bayes Capital, LLC	1/15/2015	1/30/2015	1/30/2015	1/30/2015	NA	NA	Member / TPH	54 Jefferson Avenue Suite 2 Westwood, NJ 07675	201-660-7187	Agency
Belvedere Trading, LLC	11/1/2011	3/1/2012	11/29/2011	NA	1/3/2005	4/4/2011	Member / TPH	10 S Riverside Plaza Suite 2100 Chicago, IL 60606	312-893-3750	Proprietary
Bengal Capital Trading LLC	NA	NA	NA	NA	1/15/2013	NA	Member / TPH	440 S LaSalle Street Suite 2121 Chicago, IL 60605	312-362-4928	
Benjamin & Jerold Brokerage I, LLC	10/1/2009	NA	NA	NA	NA	NA	Member / TPH	80 Broad Street 6th Floor New York, NY 10005	646-558-0055	Agency
BGC Financial, LP	8/17/2009	NA	NA	NA	NA	NA	Member / TPH	One Seaport Plaza 19th Floor New York, NY 10038	646-346-7000	Agency
Blaylock Van, LLC	5/3/2010	NA	NA	NA	NA	NA	Member / TPH	600 Lexington Avenue 3rd Floor New York, NY 10022	212-715-6800	Agency
Bloomberg Tradebook, LLC	10/23/2008	10/4/2010	5/14/2010	5/14/2010	NA	NA	Member / TPH	919 3rd Avenue New York, NY 10022	646-324-3178	Agency
Blue Fire Capital, LLC	8/18/2008	10/8/2010	5/25/2010	5/27/2010	NA	NA	Member / TPH	311 S Wacker Drive Suite 2000 Chicago, IL 60606	312-242-0500	Proprietary
Bluefin Trading, LLC	8/3/2009	6/1/2015	9/27/2013	8/13/2013	4/27/2009	NA	Member / TPH	3 Park Avenue 37th Floor New York, NY 10016	212-457-9150	Agency
BMO Capital Markets Corp.	8/18/2008	11/15/2010	7/15/2014	7/15/2014	10/8/2013	11/15/2013	Member / TPH	3 Times Square New York, NY 10036	212-885-4000	Agency
BMT Trading, LLC	2/1/2010	NA	NA	NA	NA	NA	Sponsored Participant	800 3rd Avenue New York, NY 10022	212-813-0870	Proprietary
BNP Paribas Prime Brokerage, Inc.	12/3/2012	12/3/2012	NA	NA	5/18/2012	NA	Member / TPH	787 7th Avenue New York, NY 10019	212-471-6768	Clearing Firm
BNP Paribas Securities Corp.	8/18/2008	9/15/2010	5/25/2010	5/27/2010	1/5/2005	10/15/2010	Member / TPH	787 7th Avenue New York, NY 10019	212-841-2000	Proprietary
BNY Mellon Capital Markets, LLC	NA	NA	NA	1/17/2017	NA	NA	Member / TPH	101 Barclay Street New York, NY 10286	212-815-4972	Market Maker
Boerboel Capital, LLC	NA	NA	NA	NA	2/1/2017	NA	Member / TPH	300 N LaSalle Street Suite 2060 Chicago, IL 60654	708-967-8843	
BTIG, LLC	8/18/2008	11/15/2010	5/25/2010	5/27/2010	NA	NA	Member / TPH	600 Montgomery Street 6th Floor San Francisco, CA 94111	415-248-2200	Market Maker
C&C Trading, LLC	8/18/2008	10/11/2010	5/25/2010	5/27/2010	NA	NA	Member / TPH	71 Arch Street 1st Floor Greenwich, CT 06830	212-706-1227	Proprietary
Canaccord Genuity, Inc.	10/1/2013	10/1/2013	6/10/2010	6/10/2010	NA	NA	Member / TPH	535 Madison Avenue New York, NY 10022	212-389-8000	Market Maker
Canadian Imperial Holdings, Inc.	10/15/2008	11/15/2010	NA	NA	NA	NA	Sponsored Participant	300 Madison Avenue 5th Floor New York, NY 10017	212-856-3877	Proprietary
Cantor Fitzgerald & Co.	10/23/2008	2/13/2015	5/25/2010	5/27/2010	NA	NA	Member / TPH	110 E 59th Street 4th Floor New York, NY 10022	212-938-5000	Institutional / Agency
Capital Institutional Services, Inc.	8/18/2008	NA	5/25/2010	5/27/2010	NA	NA	Member / TPH	1700 Pacific Avenue Suite 1100 Dallas, TX 75201	214-720-0055	Agency
Cardinal Capital Management LLC	NA	NA	NA	NA	10/1/2007	NA	Member / TPH	141 W Jackson Boulevard Suite 2200A Chicago, IL 60604	312-477-8400	
CF Global Trading, LLC	10/23/2008	1/3/2011	NA	NA	NA	NA	Member / TPH	60 E 42nd Street Suite 1455 New York, NY 10165	212-888-4711	Market Maker
Charles Schwab & Co., Inc.	NA	NA	NA	4/3/2017	6/2/1980	NA	Member / TPH	211 Main Street San Francisco, CA 94105	415-636-7000	Public Customer Business
Chimera Securities, LLC	6/2/2014	6/2/2014	6/25/2014	6/25/2014	NA	NA	Member / TPH	27 Union Square W 4th Floor New York, NY 10003	646-597-6100	Proprietary Trading

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CIBC World Markets Corp.	8/18/2008	11/15/2010	NA	NA	2/14/1973	NA	Member / TPH	425 Lexington Avenue New York, NY 10017	212-856-4000	Proprietary
Citadel Securities, LLC	10/23/2008	10/1/2010	5/14/2010	5/14/2010	4/17/2002	10/7/2010	Member / TPH	131 S Dearborn Street 32nd Floor Chicago, IL 60603	312-395-2100	Market Maker
Citi Order Routing and Execution, LLC	8/18/2008	9/15/2010	5/25/2010	5/27/2010	10/1/2008	9/24/2010	Member / TPH	11 Ewall Street Mount Pleasant, SC 29464	843-789-2080	Proprietary
Citigroup Derivatives Markets, Inc.	NA	NA	NA	NA	12/3/2004	2/25/2011	Member / TPH	130 Cheshire Lane Suite 102 Minnetonka, MN 55305	212-723-2960	
Citigroup Global Markets, Inc.	9/24/2008	12/15/2010	5/25/2010	5/27/2010	5/2/2011	NA	Member / TPH	390-388 Greenwich Street New York, NY 10013	212-816-6000	Full Service
Clarksons Platau Securities, Inc.	NA	NA	1/15/2015	NA	NA	NA	Member / TPH	280 Park Avenue 21st Floor New York, NY 10017	212-317-7080	Public Customer Business
Clearpool Execution Services, LLC	5/15/2014	5/15/2014	6/16/2014	6/16/2014	NA	NA	Member / TPH	17 State Street 38th Floor New York, NY 10004	212-531-8500	Public Customer Business
CLSA Americas, LLC	NA	NA	5/21/2013	5/21/2013	NA	NA	Member / TPH	1301 Avenue of the Americas 15th Floor New York, NY 10019	212-549-5097	Agency
CMT Fund XXV Limited	7/2/2012	7/2/2012	NA	NA	NA	NA	Sponsored Participant	500 West Monroe Street Suite 2630 Chicago, IL 60661	312-320-7897	Agency
CMT Trading, LLC	3/17/2014	3/17/2014	3/5/2014	3/5/2014	NA	NA	Member / TPH	500 W Monroe Street Suite 2630 Chicago, IL 60661	312-930-9050	Proprietary
CMZ Trading LLC	NA	NA	NA	NA	10/1/2004	NA	Member / TPH	141 W Jackson Boulevard Suite 825 Chicago, IL 60604	312-604-3310	
CODA Markets, Inc.	10/15/2008	10/4/2010	5/28/2010	5/27/2010	NA	NA	Member / TPH	2624 Patriot Boulevard Glenview, IL 60026	224-521-2700	ATS
Cognitive Capital, LLC	NA	NA	NA	NA	5/13/2004	NA	Member / TPH	141 W Jackson Boulevard Suite 1620 Chicago, IL 60604	312-431-0400	
Comhar Capital Markets, LLC	2/27/2017	NA	NA	NA	NA	NA	Member / TPH	311 S Wacker Drive Suite 2280A Chicago, IL 60606	872-205-0190	Firm Proprietary Trading
Compass Professional Services, LLC	6/15/2011	NA	NA	10/1/2015	4/12/2005	9/24/2010	Member / TPH	111 W Jackson Boulevard 20th Floor Chicago, IL 60604	312-692-5000	Proprietary
Consolidated Trading LLC	NA	NA	NA	NA	1/2/2002	NA	Member / TPH	71 S Wacker Drive Suite 2300 Chicago, IL 60606	312-360-7300	
COR Clearing, LLC	10/15/2009	NA	NA	NA	NA	NA	Member / TPH	1200 Landmark Center 1299 Farnam Street Suite 800 Omaha, NE 68102	402-384-6100	Clearing Firm
Cowen and Company, LLC	8/18/2008	10/7/2010	5/14/2010	5/14/2010	NA	NA	Member / TPH	599 Lexington Avenue 20th Floor New York, NY 10022	646-562-1010	Market Maker
Cowen Execution Services, LLC	10/15/2008	9/1/2010	5/25/2010	5/27/2010	NA	NA	Member / TPH	1633 Broadway 48th Floor New York, NY 10019	800-367-8998	Full Service
Cowen Prime Services, LLC	3/15/2011	3/15/2011	NA	NA	NA	NA	Member / TPH	599 Lexington Avenue 21st Floor New York, NY 10022	646-562-1010	Agency
Credit Suisse Securities (USA), LLC	9/3/2008	10/1/2010	5/25/2010	5/27/2010	8/14/1981	10/8/2010	Member / TPH	11 Madison Avenue New York, NY 10010	212-325-2000	Full Service
Critical Trading, LLC	7/1/2014	NA	NA	NA	NA	NA	Member / TPH	120 W 45th Street 15th Floor New York, NY 10036	646-918-0529	Firm Proprietary Trading/Market Maker
CSS, LLC	NA	NA	NA	NA	8/21/1998	NA	Member / TPH	175 W Jackson Boulevard Suite 440 Chicago, IL 60604	312-542-8505	
CTC, LLC	NA	NA	NA	NA	3/25/1998	3/3/2011	Member / TPH	440 S LaSalle Street 4th Floor Chicago, IL 60605	312-863-8000	
Cutler Group, LP	4/1/2010	10/6/2010	NA	10/16/2015	4/5/1999	NA	Member / TPH	101 Montgomery Street Suite 700 San Francisco, CA 94104	415-293-3956	Market Maker
DART Executions, LLC	8/18/2008	10/1/2010	5/25/2010	5/27/2010	1/2/2008	10/20/2010	Member / TPH	350 N Orleans Street Suite 2N Chicago, IL 60654	312-244-5400	Proprietary
Dash Financial Technologies, LLC	10/23/2008	7/2/2012	6/9/2010	6/9/2010	5/19/2000	9/30/2010	Member / TPH	311 S Wacker Drive Suite 1000 Chicago, IL 60606	312-988-2006	Market Maker
Deutsche Bank Securities, Inc.	10/15/2008	10/11/2010	5/21/2010	5/21/2010	4/25/1996	8/15/2011	Member / TPH	60 Wall Street New York, NY 10005	212-250-2500	Full Service
DRW Securities, LLC	9/1/2009	11/1/2010	5/25/2010	5/27/2010	11/23/1998	1/22/2016	Member / TPH	540 W Madison Street Suite 2500 Chicago, IL 60661	312-542-1000	Proprietary / Market Maker
E*TRADE Securities, LLC	NA	NA	NA	6/10/2010	NA	NA	Member / TPH	11 Times Square 32nd Floor New York, NY 10036	646-521-4300	Agency
EG Market Technologies, LLC	4/3/2017	4/3/2017	4/3/2017	4/3/2017	NA	NA	Member / TPH	767 5th Avenue 45th Floor New York, NY 10153	646-757-2831	Proprietary / Market Maker
Electronic Transaction Clearing, Inc.	10/23/2008	9/1/2010	5/25/2010	5/27/2010	NA	NA	Member / TPH	660 S Figueroa Street Los Angeles, CA 90017	949-533-1885	Market Maker
Equitec Proprietary Markets LLC	NA	NA	NA	NA	6/1/2001	NA	Member / TPH	111 W Jackson Boulevard 20th Floor Chicago, IL 60604	312-692-5000	
Essex Radez, LLC	2/17/2009	10/1/2010	5/10/2010	5/14/2010	NA	NA	Member / TPH	440 S LaSalle Street Suite 1111 Chicago, IL 60605	312-212-1815	Service Bureau
Evercore Group, LLC	NA	NA	5/10/2017	NA	NA	NA	Member / TPH	55 E 52nd Street New York, NY 10055	212-857-3100	Public Customer Business
FIS Brokerage & Securities Services, LLC	8/18/2008	10/1/2010	5/6/2010	5/6/2010	NA	NA	Member / TPH	2100 Enterprise Avenue Geneva, IL 60134	630-482-7100	Agency
Flow Traders US Institutional Trading, LLC	NA	NA	6/1/2016	NA	NA	NA	Member / TPH	1114 Avenue of the Americas 4th Floor New York, NY 10036	917-210-5000	Riskless Principal
Flow Traders US, LLC	10/1/2009	8/1/2012	2/28/2014	2/28/2014	8/31/2010	NA	Member / TPH	1114 Avenue of the Americas 4th Floor New York, NY 10036	917-210-5000	Hedge Fund
G1 Execution Services, LLC	8/18/2008	12/1/2010	4/17/2010	4/17/2010	NA	NA	Member / TPH	175 W Jackson Boulevard Suite 1700 Chicago, IL 60604	312-362-0404	Market Maker
G2 Trading, LLC	6/1/2016	NA	NA	NA	NA	NA	Member / TPH	325 S Sangamon Street Chicago, IL 60607	404-697-9915	Firm Proprietary Trading Options Market Making
Getler Securities, LLC	5/1/2015	NA	NA	NA	NA	NA	Member / TPH	350 N Orleans Street 7th Floor Chicago, IL 60654	312-408-4354	Firm Proprietary Trading

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Geneva Stock, LLC	NA	NA	NA	NA	4/6/2001	NA	Member / TPH	440 S LaSalle Street Suite 1711 Chicago, IL 60605	312-362-4404	
Glenn Smith Traders, LLC	NA	NA	NA	NA	9/9/2010	NA	Member / TPH	995 Ridgewood Drive Chicago, IL 60185	630-346-8739	
Global Express Brokers, LP	2/1/2010	10/5/2010	12/1/2015	10/15/2015	12/23/2003	9/24/2010	Member / TPH	401 City Avenue Bala Cynwyd, PA 19004	610-617-2600	Institutional
Global Financial Management, LLC	10/1/2010	NA	NA	NA	NA	NA	Sponsored Participant	800 Third Avenue New York, NY 10022	212-813-0870	Proprietary
Global Liquidity Partners, LLC	4/21/2011	5/15/2012	NA	NA	NA	NA	Sponsored Participant	12 Broad Street Suite 201 Redbank, NJ 07701	773-459-4665	Agency
Goldman Sachs & Co. LLC	10/23/2008	10/12/2010	5/14/2010	5/14/2010	2/21/1973	10/9/2010	Member / TPH	200 West Street New York, NY 10282	212-902-1000	Full Service
Goldman Sachs Execution & Clearing, LP	10/15/2008	10/1/2010	5/14/2010	5/14/2010	NA	NA	Member / TPH	200 West Street New York, NY 10282	212-902-1000	Full Service
Gordon Haskett Capital Corporation	NA	NA	NA	5/2/2016	NA	NA	Member / TPH	441 Lexington Avenue 10th Floor New York, NY 10017	212-883-0600	Agency
Green Street Trading, LLC	11/1/2011	NA	NA	NA	NA	NA	Member / TPH	660 Newport Center Drive Suite 800 Newport Beach, CA 92660	214-749-4730	Agency
Group One Trading, LP	6/2/2015	NA	NA	9/29/2015	11/23/1994	NA	Member / TPH	440 S. LaSalle Street Suite 3232 Chicago, IL 60605	312-347-8864	Options Market Maker
GSN North America, Inc.	8/18/2008	NA	NA	NA	NA	NA	Member / TPH	520 Madison Avenue New York, NY 10022	212-659-6292	Agency
GTS Securities, LLC	12/17/2013	5/1/2012	6/2/2014	6/2/2014	NA	NA	Member / TPH	545 Madison Avenue 15th Floor New York, NY 10022	212-715-2830	Proprietary
Hailey Investments Limited	6/16/2014	NA	NA	NA	NA	NA	Sponsored Participant	Themistokli Dervi 41 #806-807 Nicosia, Cyprus	704-248-8221	Proprietary
HAP Trading, LLC	10/1/2009	11/15/2010	NA	6/2/2010	3/16/2001	NA	Member / TPH	33 Whitehall Street 6th Floor New York, NY 10004	212-380-5186	Proprietary
Hardcastle Trading USA, LLC	4/15/2009	NA	5/25/2010	5/27/2010	5/16/2005	NA	Member / TPH	755 Secaucus Road Suite F-1110 Secaucus, NJ 07094	201-305-8817	Proprietary
Henning-Carey Proprietary Trading, LLC	8/15/2012	NA	NA	NA	NA	NA	Sponsored Participant	141 W. Jackson Boulevard Suite 1801 Chicago, IL 60604	312-789-8764	Proprietary
Highbridge Capital Management, LLC	10/23/2008	NA	NA	NA	NA	NA	Sponsored Participant	9 West 57th Street 27th Floor New York, NY 10019	212-287-4900	Proprietary
Hilltop Securities, Inc.	10/23/2008	9/1/2010	NA	5/21/2013	10/1/2010	10/13/2010	Member / TPH	1201 Elm Street Suite 3500 Dallas, TX 75270	214-859-5125	Clearing Firm
HRT Financial, LLC	2/1/2010	10/1/2010	5/18/2010	5/18/2010	1/24/2011	1/24/2011	Member / TPH	32 Old Slip 30th Floor New York, NY 10005	212-293-1927	Proprietary
HSBC Securities USA, Inc.	4/3/2017	4/3/2017	4/3/2017	4/3/2017	11/21/2005	NA	Member / TPH	452 Fifth Avenue, 12th Floor New York, NY 10018	224-880-7116	Broker-Dealer
HTG Capital Partners, LLC	10/3/2016	10/3/2016	10/3/2016	10/3/2016	NA	NA	Sponsored Participant	601 South LaSalle Street 2nd Floor Chicago, IL 60605	312-327-4112	Proprietary
Hybrid Trading & Resources, LLC	NA	NA	NA	NA	3/22/2005	NA	Member / TPH	111 W Jackson Boulevard Suite 1146 Chicago, IL 60604	312-427-1585	
ICAP Corporates, LLC	NA	NA	3/28/2013	NA	NA	NA	Member / TPH	Harborside Financial Center 1100 Plaza 5, 12th Floor Jersey City, NJ 07311	212-341-9950	Agency
IEX Services, LLC	10/1/2013	10/1/2013	9/24/2013	9/24/2013	NA	NA	Member / TPH	7 World Trade Center 30th Floor New York, NY 10007	646-568-2337	ATS
IMC Financial Markets	8/18/2008	10/1/2010	5/25/2010	5/27/2010	7/5/2000	9/24/2010	Member / TPH	233 South Wacker Drive Suite 4300 Chicago, IL 60606	312-244-3320	Proprietary
Industrial and Commercial Bank of China Financial Services, LLC	5/15/2014	5/15/2014	NA	NA	NA	NA	Member / TPH	1633 Broadway New York, NY 10019	212-300-8520	Clearing Services
Instinet, LLC	8/18/2008	9/1/2010	5/14/2010	5/14/2010	12/29/2009	10/6/2010	Member / TPH	1095 Avenue of the Americas New York, NY 10036	212-310-4097	Agency
Interactive Brokers Corp.	NA	NA	NA	NA	4/21/2009	10/6/2010	Member / TPH	8 Greenwich Office Park Greenwich, CT 06831	203-618-5700	
Interactive Brokers, LLC	8/18/2008	9/15/2010	5/25/2010	5/27/2010	NA	NA	Member / TPH	One Pickwick Plaza 2nd Floor Greenwich, CT 06830	203-618-5870	Full Service
International Correspondent Trading, Inc.	8/18/2008	NA	NA	NA	NA	NA	Member / TPH	525 Washington Boulevard Suite 2401 Jersey City, NJ 07310	201-222-9300	Agency
Israel A. Englander & Co., LLC	NA	NA	NA	NA	10/27/1995	2/14/2011	Member / TPH	666 5th Avenue 14th Floor New York, NY 10103	212-841-4567	
ISTRA, LLC	12/15/2011	12/15/2011	NA	NA	NA	NA	Sponsored Participant	230 Park Avenue 10th Floor New York, NY 10169	718-618-4929	Proprietary
ITG Derivatives, LLC	8/18/2008	11/15/2010	NA	11/12/2015	2/1/2008	10/26/2010	Member / TPH	601 S. LaSalle Street Suite 300 Chicago, IL 60605	312-334-8042	Market Maker
ITG, Inc.	8/18/2008	10/1/2010	5/25/2010	5/27/2010	NA	NA	Member / TPH	One Liberty Plaza 165 Broadway, 4th Floor New York, NY 10006	212-444-6259	Agency
J.P. Morgan Securities, LLC	8/18/2008	9/15/2010	5/14/2010	5/14/2010	10/29/1985	11/18/2010	Member / TPH	383 Madison Avenue New York, NY 10179	212-622-5504	Full Service
Jane Street Capital, LLC	5/1/2009	11/15/2010	5/14/2010	5/14/2010	9/4/2012	NA	Member / TPH	One New York Plaza New York, NY 10004	212-651-6060	Agency / Proprietary
Jane Street Options, LLC	4/15/2016	NA	NA	NA	5/2/2005	NA	Member / TPH	One New York Plaza New York, NY 10004	212-651-6020	Proprietary / Market Maker
Jane Street Options, LLC	1/3/2012	NA	NA	NA	NA	NA	Sponsored Participant	One New York Plaza New York, NY 10004	212-651-6969	Proprietary
Jefferies Execution Services, Inc.	8/26/2008	9/1/2010	5/25/2010	5/27/2010	NA	NA	Member / TPH	520 Madison Avenue New York, NY 10022	646-805-5415	Full Service
Jefferies Investment Advisers	7/1/2011	7/15/2011	NA	NA	NA	NA	Sponsored Participant	520 Madison Avenue New York, NY 10022	212-323-3993	Full Service
Jefferies, LLC	10/23/2008	10/19/2010	5/25/2010	5/27/2010	7/9/2012	7/18/2012	Member / TPH	520 Madison Avenue New York, NY 10022	212-323-3987	Full Service

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JNK Securities Corp.	11/17/2008	11/15/2010	NA	NA	NA	NA	Member / TPH	902 Broadway 20th Floor New York, NY 10010	212-885-6311	Agency
Juliet Group, LLC	3/1/2011	3/1/2011	NA	NA	NA	NA	Sponsored Participant	240 E. 35th Street #3A New York, NY 10016	646-360-0595	Proprietary
Juliet Labs, LLC	9/20/2017	9/20/2017	9/20/2017	9/20/2017	NA	NA	Sponsored Participant	1 Northside Piers, 14H Brooklyn, NY 11249	646-360-0595	Proprietary
Jump Trading, LLC	8/18/2008	10/1/2010	5/14/2010	5/14/2010	4/2/2012	6/6/2017	Member / TPH	600 West Chicago Avenue Suite 825 Chicago, IL 60654	312-930-9603	Proprietary
Keefe Bruyette & Woods, Inc.	8/18/2008	12/1/2010	6/8/2010	6/8/2010	NA	NA	Member / TPH	787 7th Avenue New York, NY 10019	212-887-8965	Agency
Lakeshore Securities LP	NA	NA	NA	NA	1/24/1983	NA	Member / TPH	401 S LaSalle Street Suite 1000 Chicago, IL 60605	312-663-1307	
Lamberson Capital LLC	NA	NA	NA	NA	3/23/2016	NA	Member / TPH	71 S Wacker Drive Suite 2300 Chicago, IL 60606	312-360-7300	
Lampart Capital Markets, Inc.	NA	2/18/2014	2/26/2014	NA	NA	NA	Member / TPH	477 Madison Avenue Suite 230 New York, NY 10022	(646) 367-4660	Introducing Broker
Lamport Capital, LC	NA	NA	NA	3/15/2016	NA	NA	Member / TPH	7777 W. Glades Road Suite 213 Boca Raton, FL 33434	(561) 883-0454	Proprietary and Public Customer Business
Latour Trading, LLC	8/17/2009	10/1/2010	5/26/2010	5/27/2010	4/8/2011	NA	Member / TPH	377 Broadway 10th Floor New York, NY 10013	917-388-8625	Proprietary
Leerink Partners, LLC	8/18/2008	10/5/2010	5/26/2010	5/27/2010	NA	NA	Member / TPH	1 Federal Street 37th Floor Boston, MA 02110	800-808-7525	Agency
LEK Securities Corporation	8/18/2008	10/1/2010	5/26/2010	5/27/2010	1/9/2001	9/24/2010	Member / TPH	1 Liberty Plaza 165 Broadway, 52nd Floor New York, NY 10006	212-509-2300	Agency
Lightspeed Trading, LLC	8/18/2008	11/15/2010	5/19/2010	5/19/2010	NA	NA	Member / TPH	1001 Avenue of the Americas 16th Floor New York, NY 10018	646-393-4814	Proprietary
Lime Brokerage, LLC	8/18/2008	10/1/2010	5/26/2010	5/27/2010	6/24/2010	NA	Member / TPH	625 Broadway 12th Floor New York, NY 10012	212-219-6086	Agency
Liquidnet, Inc.	9/1/2009	9/15/2010	NA	NA	NA	NA	Member / TPH	498 7th Avenue 12th Floor New York, NY 10018	646-660-8310	Institutional
Lupo Securities, LLC	NA	NA	NA	NA	8/1/1997	NA	Member / TPH	141 W Jackson Boulevard Suite 2200A Chicago, IL 60604	312-477-8400	
Macquarie Capital (USA), Inc.	12/1/2009	NA	5/26/2010	5/27/2010	NA	NA	Member / TPH	125 West 55th Street Level 22 New York, NY 10019	212-231-2501	Agency
Marathon Trading Group, LLC	2/13/2015	NA	NA	NA	1/30/2013	NA	Member / TPH	100 Matsonford Road Building 3, Suite 240 Wayne, PA 19087	610-254-4890	Options Market Maker
Match-Point Securities, LLC	NA	NA	NA	11/16/2015	NA	NA	Member / TPH	303 East 57th Street, 26L New York, NY 10022	917-359-5734	Public Customer Business
Meadowhawk Capital LLC	NA	NA	NA	NA	6/1/2007	NA	Member / TPH	141 W Jackson Boulevard Suite 3750 Chicago, IL 60604	773-837-2612	
Merrill Lynch Professional Clearing Corp.	8/18/2008	10/5/2010	5/14/2010	5/14/2010	4/8/1985	9/24/2010	Member / TPH	One Bryant Park NY1-100-06-01 New York, NY 10036	312-260-5601	Clearing Firm
Merrill Lynch, Pierce, Fenner & Smith Incorporated	8/18/2008	10/4/2010	5/14/2010	5/14/2010	4/25/1973	9/27/2010	Member / TPH	One Bryant Park New York, NY 10036	212-449-6090	Full Service
Mizuho Securities USA, LLC	6/1/2010	1/3/2011	NA	NA	NA	NA	Member / TPH	320 Park Avenue 12th Floor New York, NY 10022	212-209-9338	Agency
MKM Partners, LLC	8/3/2009	NA	5/14/2010	5/14/2010	NA	NA	Member / TPH	300 First Stamford Place 4th Floor East Wing Stamford, CT 06902	203-987-4005	Agency
MNR Executions LLC	NA	NA	NA	NA	4/30/2008	NA	Member / TPH	141 W Jackson Boulevard Suite 3900 Chicago, IL 60604	312-878-4704	
Monadnock Capital Management, LP	NA	NA	5/26/2010	NA	12/1/2014	NA	Member / TPH	1845 Walnut Street Suite 940 Philadelphia, PA 19103	215-405-7280	Proprietary / Market Maker
Moors & Cabot, Inc.	NA	4/2/2012	NA	NA	NA	NA	Member / TPH	111 Devonshire Street Boston, MA 02109	617-314-0295	Agency
Morgan Stanley & Co. International plc	NA	NA	NA	NA	4/12/2017	NA	Sponsored Participant	20 Bank Street Canary Wharf London, UK E14 4A		
Morgan Stanley & Co., LLC	10/23/2008	9/1/2010	5/14/2010	5/14/2010	8/20/1980	9/24/2010	Member / TPH	1585 Broadway New York, NY 10036	212-761-9324	Full Service
NASDAQ Execution Services, LLC	8/19/2008	9/1/2010	5/26/2010	5/27/2010	NA	NA	Member / TPH	One Liberty Plaza 165 Broadway New York, NY 10006	212-231-5177	Exchange
National Financial Services, LLC	10/23/2008	10/4/2010	5/26/2010	5/27/2010	10/8/1987	4/16/2012	Member / TPH	200 Seaport Boulevard Boston, MA 02210	201-915-8264	Retail / Agency
National Securities Corporation	7/1/2009	NA	NA	NA	NA	NA	Member / TPH	1001 Fourth Avenue Suite 3750 Seattle, WA 98154	212-417-3636	Agency
Needham & Company, LLC	10/23/2008	10/1/2010	NA	NA	NA	NA	Member / TPH	445 Park Avenue New York, NY 10022	212-371-8411	Market Maker
Nomura Securities International, Inc.	10/23/2008	10/1/2010	5/26/2010	5/27/2010	9/1/2009	11/16/2010	Member / TPH	Worldwide Plaza 309 West 49th Street New York, NY 10019	212-667-9131	Institutional
Northern Trust Securities, Inc.	8/18/2008	10/5/2010	5/26/2010	5/27/2010	NA	NA	Member / TPH	50 South LaSalle Street Chicago, IL 60603	312-630-6045	Market Maker
Northland Securities, Inc.	12/15/2010	12/15/2010	NA	NA	NA	NA	Member / TPH	45 South 7th Street 20th Floor Minneapolis, MN 55402	612-851-5934	Proprietary
Old Mission Capital, LLC	4/16/2012	4/16/2012	4/25/2012	4/25/2012	9/27/2017	NA	Member / TPH	314 West Superior Suite 200 Chicago, IL 60654	617-642-6120	Proprietary
Olivetree Financial, LLC	NA	NA	9/1/2016	NA	NA	NA	Member / TPH	2 Stamford Plaza 281 Tresser Blvd, Suite 501 Stamford, CT 06901	203-703-0000	Agency Execution
Oppenheimer & Co. Inc.	NA	NA	NA	NA	5/17/1973	NA	Member / TPH	85 Broad Street 22nd, 24th Floors New York, NY 10004	212-668-8000	
Optiver US, LLC	8/15/2009	NA	NA	NA	6/1/2005	9/24/2010	Member / TPH	130 East Randolph Street 13th Floor Chicago, IL 60601	312-821-9263	Proprietary / Market Maker
Oscar Gruss & Son Incorporated	8/7/2017	NA	NA	NA	NA	NA	Member / TPH	430 Park Avenue 8th Floor New York, NY 10022	212-419-4005	Institutional Agency Trading Business

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OTA, LLC	8/18/2008	10/7/2010	NA	NA	NA	NA	Member / TPH	One Manhattanville Road Purchase, NY 10577	914-460-4071	Institutional
PEAK6 Capital Management, LLC	8/1/2014	NA	NA	12/2/1997	12/2/1997	NA	Member / TPH	141 W. Jackson Blvd. Suite 500 Chicago, IL 60604	312-362-2357	Proprietary Trading
PEAK6 Capital Management, LLC	11/3/2008	7/15/2011	NA	NA	NA	NA	Sponsored Participant	141 W. Jackson Blvd. Suite 500 Chicago, IL 60604	312-362-2401	Market Maker
Penserra Securities, LLC	8/18/2008	10/6/2010	NA	NA	NA	NA	Member / TPH	140 Broadway 26th Floor New York, NY 10005	212-607-3190	Agency
Pershing, LLC	8/18/2008	9/15/2010	5/26/2010	5/27/2010	2/21/1973	9/28/2010	Member / TPH	One Pershing Place Jersey City, NJ 07399	201-413-2826	Agency
Pictet Overseas, Inc.	6/1/2015	6/1/2015	5/26/2010	5/27/2010	NA	NA	Member / TPH	1000 de la Gauchetiere Ouest Suite 3100 Montreal, Quebec H3B 3W5	514-350-6263	Agency
Piper Jaffray & Co.	10/15/2008	11/15/2012	5/14/2010	5/14/2010	NA	NA	Member / TPH	800 Nicollet Mall Minneapolis, MN 55402	612-303-2211	Market Maker
Potamus Trading, LLC	4/15/2013	4/15/2013	4/11/2013	4/11/2013	NA	NA	Member / TPH	2 Seaport Lane 5th Floor Boston, MA 02210	617-855-8721	Proprietary / Market Maker
Princeton Alpha Management, LP	12/1/2015	12/1/2015	12/1/2015	12/1/2015	NA	NA	Sponsored Participant	61 Princeton Hightstown Rd West Windsor, NJ 08550	609-269-9212	Agency
PTR, Incorporated	NA	NA	NA	NA	8/2/1995	NA	Member / TPH	1800 JFK Boulevard Suite 401 Philadelphia, PA 19103	267-909-8368	
Puma Capital, LLC	NA	NA	6/15/2016	6/15/2016	NA	NA	Member / TPH	287 Bowman Avenue 3rd Floor Purchase, NY 10577	212-896-2844	Proprietary Trading
Pundion, LLC	2/27/2017	2/27/2017	2/27/2017	2/27/2017	NA	NA	Member / TPH	230 Park Avenue 10th Floor New York, NY 10169	917-7203332	Proprietary Trading
Quantex Clearing, LLC	10/3/2011	12/27/2011	5/17/2011	5/17/2011	NA	NA	Member / TPH	70 Hudson Street Hoboken, NJ 07030	646-214-5608	Clearing Firm
Quantlab Securities, LP	8/18/2008	11/1/2010	5/26/2010	5/27/2010	10/5/2010	8/2/2011	Member / TPH	4200 Montrose Boulevard Suite 200 Houston, TX 77006	713-333-3704	Proprietary
Quiet Light Securities LLC	NA	NA	NA	NA	5/1/2001	NA	Member / TPH	141 W Jackson Boulevard Suite 2020A Chicago, IL 60604	312-431-0573	
Rackson Asset Management, LLC	10/1/2009	NA	NA	NA	NA	NA	Sponsored Participant	2000 Broadway Suite 22C New York, NY 10023	212-724-2567	Proprietary
Rainier Investment Management, Inc.	1/4/2010	NA	NA	NA	NA	NA	Sponsored Participant	601 Union Street Suite 2801 Seattle, WA 98101	206-518-6658	Hedge Fund
RBC Capital Markets, LLC	9/18/2008	10/14/2010	5/14/2010	5/14/2010	11/24/1993	10/19/2010	Member / TPH	3 World Financial Center 200 Vesey Street New York, NY 10281	612-373-1680	Market Maker
RGM Securities, LLC	8/3/2009	10/1/2010	5/26/2010	5/27/2010	NA	NA	Member / TPH	221 West 6th Street Suite 2030 Austin, TX 78701	512-807-5302	Proprietary
River Cross Securities, LLLP	5/1/2009	10/5/2010	NA	NA	NA	NA	Member / TPH	401 City Avenue Suite 912 Bala Cynwyd, PA 19004	610-747-2333	ATS
Robert W. Baird & Co., Incorporated	10/23/2008	1/3/2011	NA	NA	NA	NA	Member / TPH	777 East Wisconsin Avenue Milwaukee, WI 53202	414-765-3910	Market Maker
Ronin Capital LLC	NA	NA	NA	NA	12/17/2001	NA	Member / TPH	350 N Orleans Street Suite 2N Chicago, IL 60654	312-244-5000	
Rosenblatt Securities, Inc.	8/18/2008	10/6/2010	5/26/2010	5/27/2010	NA	NA	Member / TPH	20 Broad Street 26th Floor New York, NY 10005	212-943-5225	Agency
Roth Capital Partners, LLC	8/18/2008	NA	NA	NA	NA	NA	Member / TPH	888 San Clemente Suite 150 Newport Beach, CA 92660	949-720-5708	Market Maker
RW Pressprich & Co.	2/17/2009	11/15/2010	6/2/2010	6/2/2010	NA	NA	Member / TPH	4521 Fifth Avenue New York, NY 10018	212-832-6254	Agency
SAC Capital Advisors, LP	10/23/2008	NA	NA	NA	NA	NA	Sponsored Participant	72 Cummings Point Road Stamford, CT 06902	203-890-2275	Hedge Fund
Safra Securities, LLC	NA	NA	5/26/2010	5/27/2010	NA	NA	Member / TPH	546 Fifth Avenue New York, NY 10036	212-704-5524	Market Maker
SageTrader, LLC	3/1/2016	6/5/2017	6/5/2017	6/1/2016	NA	NA	Member / TPH	One Embarcadero Center Suite 1150 San Francisco, CA 94111	646-663-1084	Public Customer Business
SAL Equity Trading, GP	9/3/2008	10/5/2010	5/26/2010	5/27/2010	NA	NA	Member / TPH	401 City Avenue Suite 220 Bala Cynwyd, PA 19004	610-617-2998	Institutional / Agency
Sanford C. Bernstein & Co, LLC	9/10/2008	10/21/2010	5/26/2010	5/27/2010	8/13/2013	NA	Member / TPH	1345 Ave of the Americas New York, NY 10105	212-823-2896	Agency
Santander Investment Securities, Inc.	4/15/2009	1/3/2011	NA	NA	NA	NA	Member / TPH	45 East 53rd Street New York, NY 10022	212-350-3659	Institutional
Scotia Capital (USA), Inc.	3/2/2009	9/15/2010	5/26/2010	5/27/2010	NA	NA	Member / TPH	1 Liberty Plaza 165 Broadway New York, NY 10008	212-225-6705	Institutional
Scottrade, Inc.	6/1/2010	11/15/2010	5/26/2010	5/27/2010	NA	NA	Member / TPH	12800 Corporate Hill Drive St. Louis, MO 63131	314-965-1555 x.6402	Retail
Seven Points Capital, LLC	NA	NA	5/14/2010	NA	NA	NA	Member / TPH	805 Third Avenue 15th Floor New York, NY 10022	212-760-0760	Agency
SG Americas Securities, LLC	9/17/2008	11/15/2011	5/14/2010	5/14/2010	4/23/2004	1/2/2015	Member / TPH	245 Park Avenue New York, NY 10167	212-278-5232	Proprietary
Silver Fern Investments, LLC	8/20/2015	8/20/2015	8/20/2015	8/20/2015	NA	NA	Sponsored Participant	533 2nd Street Encinitas, CA 92024	858-947-8650	Proprietary
Simplex Trading, LLC	3/16/2015	NA	NA	4/13/2017	8/12/2010	3/1/2017	Member / TPH	230 S. LaSalle Street Suite 4-100 Chicago, IL 60604	312-360-2440	Proprietary
SMBC Nikko Securities America, Inc.	8/7/2017	8/7/2017	8/7/2017	8/7/2017	NA	NA	Member / TPH	277 Park Avenue Fifth Floor New York, NY 10172	212-224-5039	Institutional Equity Fixed Income Institutional Banking
SogoTrade, Inc.	NA	NA	NA	6/19/2017	NA	NA	Member / TPH	11 Broadway Suite 514 New York, NY 10004	646-885-6846	Public Customer Business
Sphinx Trading, LP	NA	NA	NA	NA	12/20/1989	NA	Member / TPH	111 W Jackson Boulevard 20th Floor Chicago, IL 60604	312-692-5076	
Spot Trading, LLC	6/1/2012	NA	1/25/2013	1/25/2013	8/20/1999	7/26/2012	Member / TPH	440 South LaSalle Suite 2800 Chicago, IL 60605	312-362-4569	Proprietary

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Stifel Nicolaus & Company, Incorporated	8/18/2008	NA	6/2/2010	6/2/2010	NA	NA	Member / TPH	501 North Broadway St. Louis, MO 63102	410-454-4096	Agency
Stock USA Execution Services, Inc.	NA	NA	5/26/2010	5/27/2010	NA	NA	Member / TPH	1717 Route 6 Suite 102 Carmel, NY 10542	845-531-2631	Agency
Stuyvesant Trading Group, LLC	8/15/2013	NA	NA	NA	NA	NA	Member / TPH	100 Wall Street Suite 604-A New York, NY 10005	212-433-7124	Market Maker
Summit Securities Group, LLC	7/16/2012	7/16/2012	8/20/2012	8/20/2012	6/6/2012	NA	Member / TPH	2 Rector Street 16th Floor New York, NY 10006	646-651-4380	Proprietary
Sumo Capital, LLC	7/15/2013	NA	NA	10/15/2015	-3/3/2008	NA	Member / TPH	440 S LaSalle Street Suite 2101 Chicago, IL 60605	212-433-7667	Proprietary
Sun Trading, LLC	8/18/2008	10/1/2010	5/26/2010	6/27/2010	9/3/2013	NA	Member / TPH	100 South Wacker Suite 300 Chicago, IL 60606	312-924-4751	Proprietary
Susquehanna Financial Group, LLLP	9/3/2008	10/5/2010	5/26/2010	5/27/2010	NA	NA	Member / TPH	401 City Avenue Suite 220 Bala Cynwyd, PA 19004	610-617-2999	Institutional / Agency
Susquehanna Investment Group	NA	NA	NA	NA	5/1/1987	NA	Member / TPH	401 City Avenue Suite 220 Bala Cynwyd, PA 19004	610-617-2600	
Susquehanna Securities	10/15/2014	10/15/2014	10/15/2014	10/15/2014	4/4/1994	9/24/2010	Member / TPH	401 City Avenue Suite 220 Bala Cynwyd, PA 19004	610-617-2618	Proprietary
Synergy Capital Management, LLC	8/1/2016	NA	NA	NA	6/5/2007	NA	Member / TPH	141 W. Jackson Boulevard Suite 1350 Chicago, IL 60604	312-986-8869	Market Maker
TD Ameritrade Clearing, Inc.	5/3/2011	5/3/2011	NA	5/27/2010	NA	NA	Member / TPH	200 South 108th Avenue Omaha, NE 68154	402-970-5271	Agency
Telsey Advisory Group, LLC	1/24/2011	8/15/2014	NA	NA	NA	NA	Member / TPH	635 Fifth Avenue 12th Floor New York, NY 10017	212-584-4628	Agency
Tewksbury Investment Fund, Ltd.	10/23/2008	11/15/2010	NA	NA	NA	NA	Sponsored Participant	Washington Mall I 20th Church Street, 4th Floor Hamilton, HM 11 Bermuda	212-310-7076	Proprietary
Tewksbury Investment Fund, Ltd.	7/1/2011	7/1/2011	1/6/2015	1/6/2015	NA	NA	Sponsored Participant	Washington Mall I 20th Church Street, 4th Floor Hamilton, HM 11 Bermuda	610-971-5000	Proprietary
Themis Trading, LLC	8/18/2008	10/1/2010	NA	NA	NA	NA	Member / TPH	10 Town Square Suite 100 Chatham, NJ 07928	866-384-3647	Agency
ThinkTrade, LLC	2/1/2010	10/20/2010	1/9/2015	1/9/2015	NA	NA	Sponsored Participant	2210 Encintas Boulevard Suite 1 Encintas, CA 92024	760-452-2451	Proprietary
Timber Hill, LLC	2/16/2010	NA	NA	NA	12/27/1996	12/15/2010	Member / TPH	One Pickwick Plaza Suite 200 Greenwich, CT 06830	203-618-5806	Market Maker